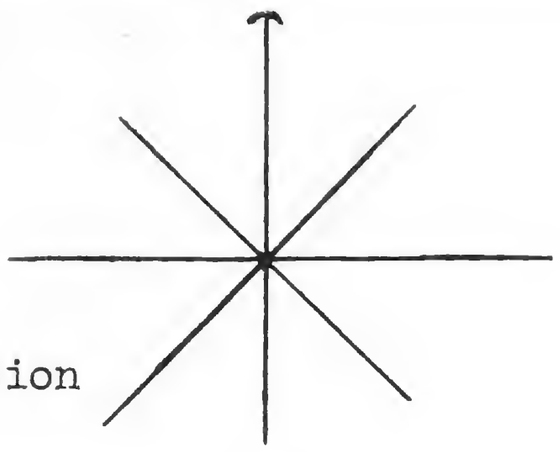


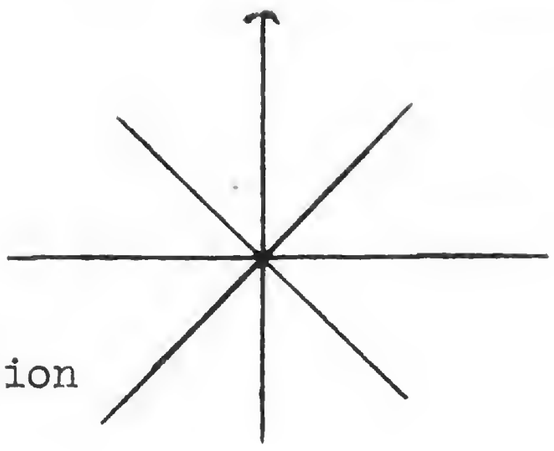
1st DAY 010(ship) 0003(cruise)

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
R.C. BALCOMB
T.J. Lewis

Date 7 OCTOBER, 1966
Pg.# 1

TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
1200					Cast off lines
1234	Brown booby	3	-		sitting on ≠ 3 bouy, entrance to Pearl Harbor
1240					last bouy at Pearl Harbor entrance; watch commenceth
1251	Birds				very large flock of birds accompanying small vessel 3 m; to starboard. number impossible to estimate flock has started moving SW; we have changed course to their direction
1258	RFB	1	E		adult light phase
1315	RE flock 1251				mostly shear-pet, 50-100 birds.
1325	Wedgetail	1	—		light Phase.
1327	Pom. Jaeger	1	—		~~dark~~ light phase, a.
1330	Wedge-tail	2	—		light phase
1330	"	1			light.
1330	"	3	@		2 light, 1 int.
1330	Common noddy?	1	@		sighting unreliable possibly jaeger- slow flapping dark bird.
1337	Wedgetail	1	E		lt.
1337	"	1	E		lt.
1337	"	1	@		lt.
1352	"	1	@		lt.
1355	"	2	SE		too far to tell color phase
1400	"	1	SE		lt. phase
1404	"	1	N		" "
1406	RFB	1	W		Ad light phase
1408	wedge tail	2	W		1 light, 1 intermediate phase
1410	"	1	—		light Phase
1414	"	2	SE		" "
1416	"	1	"		" "
1417	White-Bumped Storm Pet.	1	SE		very broad white rump
1420	wedge-tail	1	SE		light phase
1421	" "	1	SE		light phase
1421	CNT	1	NW		low to water
1424	Pom Jaeger	1	NE		light phase
1425	wedge-tail	3	SE		" "
1427	" "	1	SE		" "
1431	" "	4	SE		way out
1435	" "	1	W		light Phase
1436					Pom. Jaeger sat on water Same bird as above
1442	wedge-tail	1	SE		light phase
1444	" "	1	SE		" "
FF 1446	" "	6015	@		To far to determine Color Phase
1446	Pom Jaeger	1	N		Dark Phase
1450	wedge-tailed	4	NW		light Phase

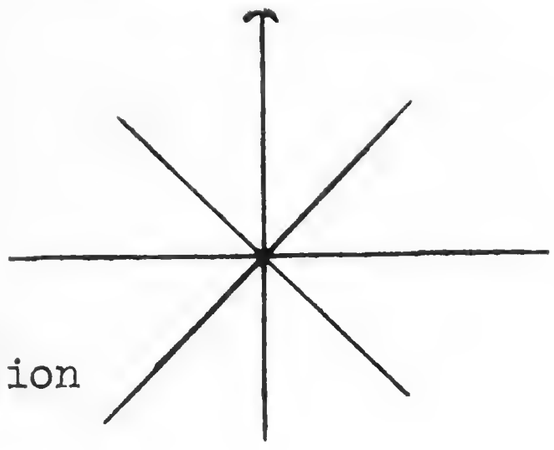


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
T.J. Lewis 1400-1600
B.A. Harrington 1600-1800

Date 7 October
Pg.# 2

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1456	Pom Jaeger	2	W		following ship light phase
AF	1459	Wedge-tail	5			light phase
		CNT	1			Feeding Joined by the above two Jaegers
	1500	wedge tail	1	N		light phase
	1505	Shear-Pet	1	SE		
	1508	wedge tail	2	SE		light phase
	1516	" "	1	NW		" "
	1512	" "	3	W		" "
	1514	CNT	1	NE		low to H_2O
TF	1516	Wedge-Tail	5	SE		light phase
	1522	" "	2	SE		" " flying closely
	1522	BFB	1	W		Ad - Red-foot Booby
	1525	Ruddy Turnstone	1	W		circling ship for about 10 min.
	1531	Common Noddy Tern	3	NE		
		Pom sp Jaeger	1 ad H. Ph.			Jaeger chasing one of the terns for a few seconds
	1533	Pom sp Jaeger	2			1 adult + 1 imm sitting on H_2O
	1535	Pom sp Jaeger	3			imm seen but not together - one adult light Phase on H_2O 1 adult + 1 imm flying together
	1541	wedge-tail	3	SW		light phase
FF	1547	Shear-Pet	25±10	W		Feeding
	1602	Sooty Tern	2	NW		
	1603	Shear-Pet	1	SE		
	1607	Wedgetail	1	NW		light ph.
	1610	Shear-Pet	2	NW		
~~FF~~	1611	Wedgetail	1	SE		light ph
FF	1615	Shear Pet	125±5%			appeared to be mostly Wedgetail
	1621	WRSP	1			Not LEACH'S ! No doubt about that. Broad white rump. Wilson's-like flight
	1627	Bird	2	SE		
	1631	"	1	—		
	34	Wedgetail	1	NW		light
	42	Sooty/Slender.	2	SSE		
	55	Wedge tail	1	NW		light
FF	1700	Terns or Jaeger	6			distant
		Shear pet	10	S		
	1704	Newell's	1	W		
	1705	Shear/pet	1	NW		
	1710	Wedgetail Shear	1	W		
	1712	Wedgetail Shear	1	W		
	1750	Pterodroma sp.	1			sitting On H_2O - probably dark rump.



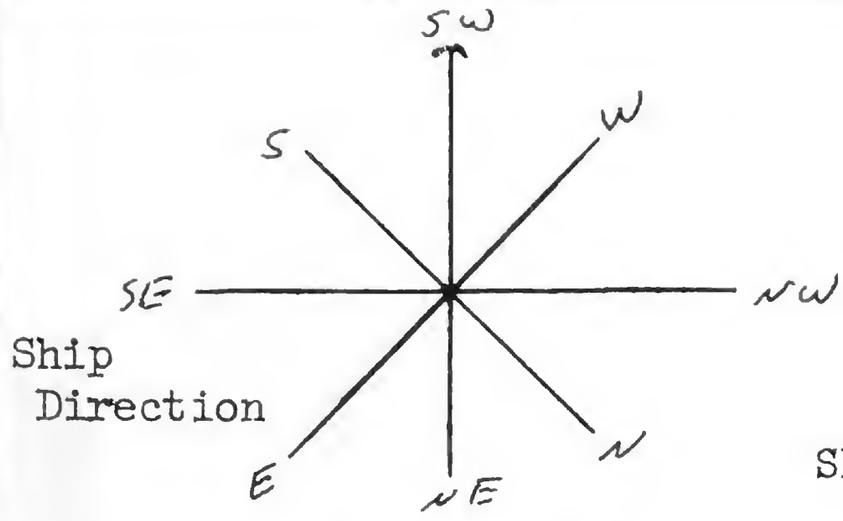
Ship
Direction

OBSERVERS:
P. Gould 1800 - Sunset

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

Date 7 October
Pg.# 3

TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
1804	Pomarine Jaeger	2	follow ship		both adult light phase but without elongated dark rectrices.
					Watch secured at 1823



Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Gould 0600 - 0800
Balcomb 0800 ->

Date 08 October, 1966
Pg.# 1

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
					begin observation at 0615
					Sunrise
0632	Pterodroma	1	N		small, appeared to be light grey backed and all white below but too far out to be sure slight swift + direct as if migrating.
0644	Golden Plover	1	S		
0649	Wedge-tail Shear	1	E		leaving flight, almost entirely gliding - light phase
0652	" " "	1	SSW		" " " " " " "
0655	Black-winged Petrel	1			most likely this species, but could have been Bonin Island.
0700	wedge-tail shear	4	NW		appeared to be searching light phase
0708	white-rumped Storm petrel	1			broad white rump, looked different from most I've seen on other cruise (RFB)
0715	Shear-pet	1	E		dark; too far for ident.
0730	Bird	1	E		Lg. white, close to water; RFB or BFB
0741	Sooty/grey back Tern	1	NE		
0744	Tropicbird	1	on H_2O		
0745	Red-tail Tropicbird	1	—		— — — over ship
0748	Blck-wing Petrel	1	S		
0750	Pterodroma	3+			
0750	"	2	S		
0753	Cookes Petrel	1	NNW		thin black underwing border
0758	wedgetail Shear	1	NNE		light Phase
0800	Black-wing Petrel	1	NNW		
0803	Small Pterod.	1	N		
0806	Dark-rump? Petrel	2	NNW		
0814	Wedgetail shear.	1	N		light phase
0817	Small Pterodroma	1	NE		
0824	G. Frigate	1			♀ occasionally swooping and grabbing with bill for flying fish on the wing. I didn't see her catch any
0833	Golden Plover	1			
0905	Black-wing pet.	1			around for ca. 10 min.
0916	Frigate sp	1			
0924	Black-wing pet	1			
0924	small pterodroma	1			
0924	"	2			

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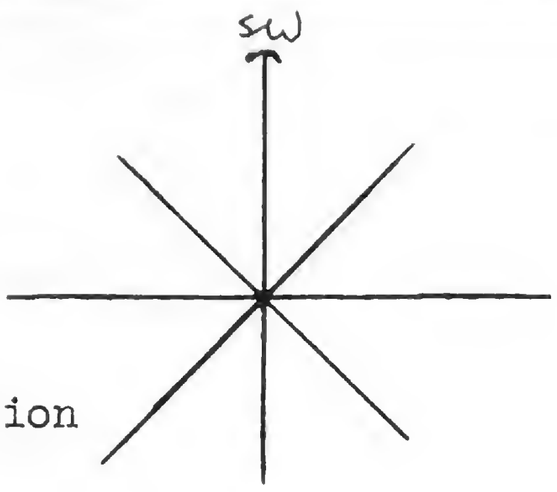


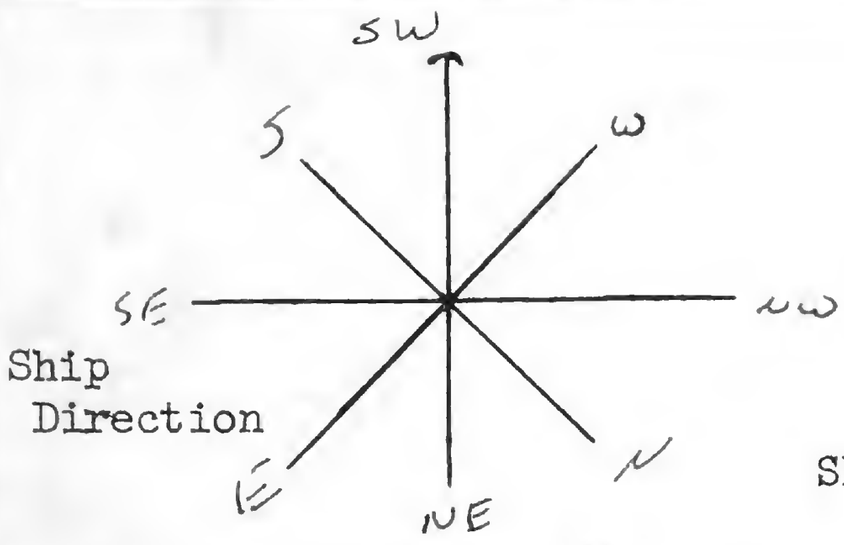
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
0800 → 1000 Balcomb
1000 - 1200 Lewis
1200 — Harrington

Date 8 OCT. 1966
Pg.# 2

TIME	SPECIES	#	SPECIMEN or DIR. BAND NO.	REMARKS
0934	Black-wing pet.	1	◎	
0935	Wedgetail	1	NE	flying together direction meaningless, they changed several times.
	Newell's	1	NE	
0940	Dark rump?	1	NE	broad dark margins on wing.
0945	Black-wing pet.	1	◎	
0954	"	1	N	
1003	"	1	NE	
1012	"	1	NNE	
1016	"	1	NE	
1029	"	1	S	
1031	"	1	S	
1038	"	1	NE	
1039	"	1	◎?	
1040	Small Pterodroma	1	NE	way out
1045	" "	1	◎	" "
1047	Black-wing Pet	1	NE	
1050	P. externa	1	NE	
1050	P. externa	1	NE	Probably White neck since it appeared to have some indication of a dark wing border + a dark head —
1056	Black-wing Pet	1	NE	
1104	P. externa	1	N	
1115	Bird	1		
1125	shear-Pet	1	SE	
1129	P. externa	1	N	
1132	Mottled Petrel	1	SE	
1147	wedge-tail	2	—	
1156	white-tail Tropicbird	1	G	adult over ship (saw white plume)
1207	Newell's Shearwater	1	SW	had more dark bordered underwing pattern than I've ever seen - white patch extended well into rump.
1215	Bird	1		horizon
5F 1216	J.F.P.	6		all together. Searching flock
1218	Newells	1		
1220	Mottled Petrel	1	SE	
1224	P. hypoleuca	1	E	
1225	P externa	1	—	
1225	Juan Fernandez	1	N	
1227	Black-wing Pet	2	—	sitting on H2O
1228	Bird	1	S	
1235	Mottled Pet.	1	S	
1239	Juan Fernandez	1	◎	
1239	white-tailed Tropicbird	1	◎	Inspected ship
1257	JFP	1	◎	
1302	RFB	1	N	SA

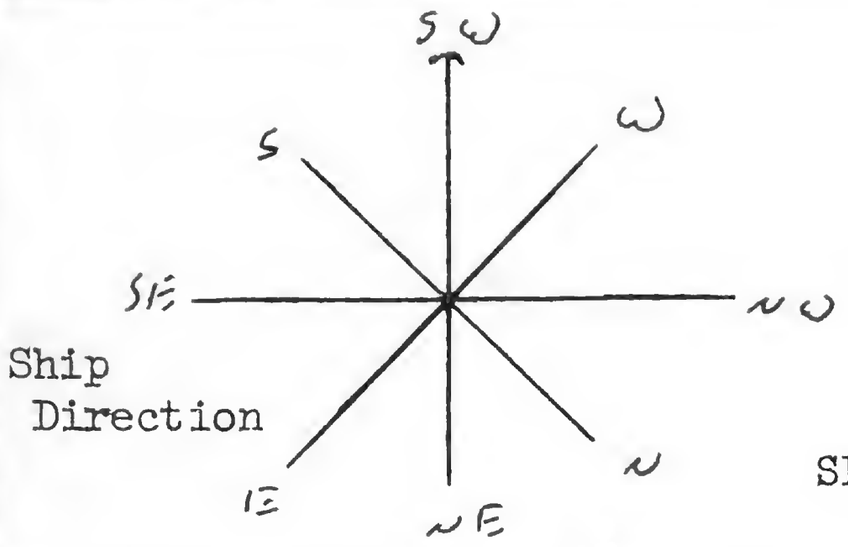


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
-1400 Harrington
1400-1600 Gould

Date 8 October 1966
Pg.# 3

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1302	Pterodroma	1	N		
	1309	P. externa	3			
	1309	JFP	1			together, one seen well
	1315	JFP	1			Molt, in upper tail coverts
	1324	Shear-Pet	1	S		
	1326	Black-wing Pet	1			
	1331	Wedge-Tail	1			light Phase
	1332	" "	2	N		" "
	1333	wedge-tail	1	N		" "
		" "	2	N		" "
SF	1355	Sooty Tern	4			Searching flock
		Shear-Pet.	20±5			
	1358	JFP	1			
	1407	JFP	1	NE		
	1413	white-tail Tropicbird	1			over ship shielpeaked at 1422 adult
	1415	Red tailed Tropicbird	1	on H_2O		
	1416	wedge-tail Shearwater	1			Light Phase
	1418	Juan Fernandez Petrel	1	S		
	1423	white-rump Storm Petrel	1			brood white rump
	1423	Shear-Petrel	1			distant.
	1426	Small Pterodroma	2	on H_2O		flew SE probably black-wing - slight gray back
	1430	Mottled? Petrel	1	W		Ventral surface not seen
	1431	Small Pterodroma	1	SW		
	1431	Black-wing ? Petrel	1	SW		
	1434	Wedge-tail Shearwater	1	SE		Light Phase
	1437	Small Pterodroma	1	S		
	1442	white-tail Tropicbird	1			adult overship looksent like band at 1413
	1445	Small Pterodroma	1	S		
	1451	Shear/n Petrel	1			
	1455	Wedge-tailed Shearwater	1	SW		Light Phase

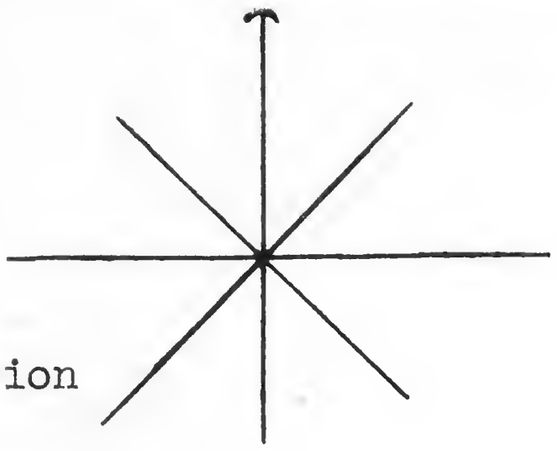


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
14-1600 Gould + Lewis

Date 8 October
Pg.# 4

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1508	Large Pterodroma	1	NNW		
	1514	Juan Fernandez Petrel	1	ⓐ	——	searching - chased flying fish but never really woo able to attack since fish were not air born long enough. Did not dive although in a similar situation I've seen Wedgetails plunge into the water after.
	1544	Wedge-tail? Shearwater	1	ⓒ		
	1545	Juan Fernandez Petrel ?	1	ⓖ	——	could have been Black-winged but underwing had a very heavy black border - bird was fairly distant when @ Light Phase
	1547	Wedge-tail Shearwater	1	N		
05	1601	Blue-faced Booby	1	on H_2O	——	Sub-adult (much black on body) with bright orange leg streamer - streamer looked very long + new.
	1620	Juan Fernandez Petrel	1	NE		
	1622	P. externa	1	ⓒ		
	1623	Storm Petrel	1	ⓟ		
	1630	Juan Fernandez Petrel	2	ⓔ		
	1632	Storm petrel	1	NE	——	didn't fly like WRSP. [redacted]
	1636	Red-footed booby	1	ⓑ	——	approached ship from southwest; then followed us.
	1703	P. externa	1	ⓔ		
	1714	"	1	ⓔ		
	1714	G. Frigate shear/pet.	1 3	NW	——	imm. Together
	1721	Shear/pet	1	—		
	1736	Juan fernandez petrel	1	ⓔ		
	1744	Wedgetail	1	ⓓ	——	lt. phase
FF	1757	"	3	ⓔ		
		Sooty tern	12 ± 3	ⓒ	——	} feeding can't tell color phase - too far.
	1800	Wedgetail	1	NE	——	lt. phase
	1806	WRSP	1	ⓔ		
	1808	"	1	ⓔ		
	1815	Black-wing pet	1	E	——	adult in primaries
	1818	Juan Fernandez petrel	1	E		

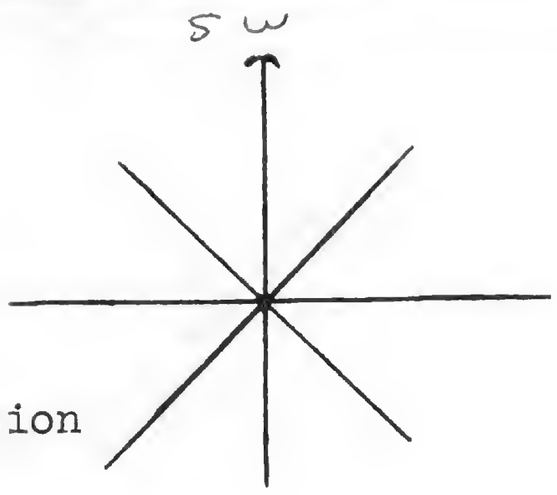


OBSERVERS:

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

Date 8 OCTOBER, 1966
Pg.# 5

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
1825	Shear pet	1	♀		
	Bird	1	♂		big, all dark.
1832	Wedgetail	3	♂		2 light, 1 int., sitting on H_2O
1839					Sunset cease observations.



Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
0600-0800 Harrington
0800- Lewis

Date 9 October 1966
Pg.# 1

TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
0630					begin observations
0640	Black-w. Pet	1	E		
0654					SUNRISE
0700	Bulwer's P.	1	E		
0702	Wedgetail	2	E		
0703	JFP	1	SE		light phase
0707	P. externa	1	N		
0710	Black-W. P.	1	N		
0710	JFP	1	N		
0716	Shear-Pet.	1			
0723	Black-w. Pet.	1	SE		
0723	"	1	SE		
0725	Shear-Pet.	1			
0730	Shear-Pet.	4	S		
0738	Shear Pet	3			
0745	Bird	1			
0747	Shear-Pet	2	E		
0754	P. Externa	2	N		
0755	Shear-Pet	1			
0755	Black-wing Pet	1	E		
0757	JFP	1	NW		
080[illegible]	P. hypoleuca?	1			
0804	P. externa	1	SW		
0806	Shear-Pet	2			
0810	" "	1			
0810	" "	1			
0811	" "	1	SW		
0817	" "	1	SW		
0822	wedge-Tail	1	N		light Phase
0826	JFP	1	E		
0826	White-necked	1	E		
0834	Black-wing Pet	1	NE		
0842	" " "	1	S		
0847	Shear-pet	1	E		
0848	" "	1	SW		
0854	Black-wing Pet	1	S		
0904	JFP	1	E		
0907	Wedge-tail	3	E		light phase
0909	P. externa	1	E		looked like JFP Nutscene
0912	Shear-Pet	1	SE		
0914	" "	1	N		
0925	Wedge-tail	1	E		Dark Phase - sitting on water
0928	JFP	1	E		
0932	Shear-Pet	1	N		
0933	Bird	1			
0936	Black-wing Pet	1	E		
0939	" " "	1	E		

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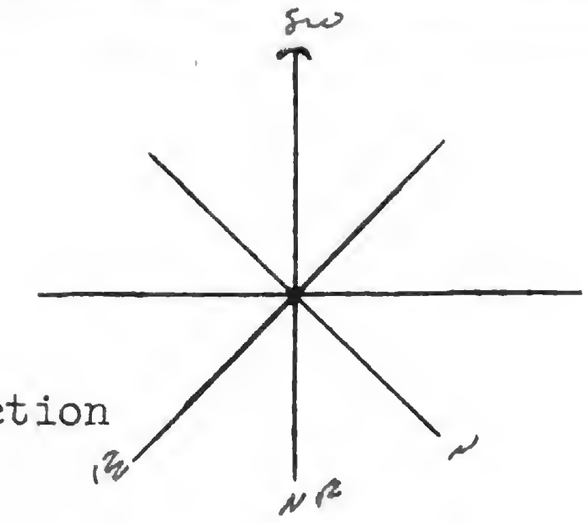


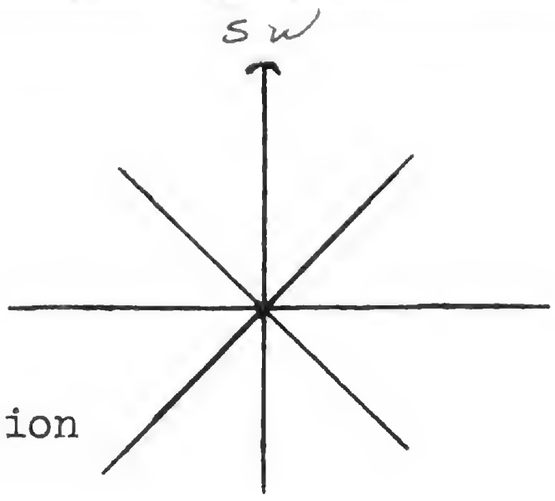
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
-10:00 Lewis
1200-1400 Gould
1400-1600 Harrington

Date 9 October
Pg.# 02

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
0957	RTTB	1	O		Following ship Ad
1005	P. Externa	1	SW		1025 identified as JFP - had parallel course to ship
1005	Black-wing Pet	1	SE		
1020	Sooty tern	3	S		traveling low to water
1022	Wedgetail	1	NE		lt phase.
1025	WRSP	1	S		not leaches (BAH)
1030	P. externa	1	NE		
1030	Pterodroma	1			JFP size
1045	Frigate sp	1			
1045	RTTB	1			sitting on water
1045	P. externa	2	SW		
1106	Wedgetail	3			2 lt. 1 dark.
1122	Shear-pet	2	S		
1133		2			Sperm whale. ca 33'
1139	Shear-pet	1	N		light underneath
1142	Fairy tern	1			possibly immature slight darkish areas.
1210	Bulwers Petrel	1	SE		searching
1216	Wedge-tail Shearwater	1	SE		searching - light phase
1245	birds	5+	77		feeding flock barely visable on horizon. Could get make out silhouettes of a few birds on cloud occasions & against the sky or water.
1301	Shearwater-Petrel	1			
1323	Black-winged Petrel	1	NW		
1335	Juan Fern. Pet	1			
1335	Shorebird	1	S		
1336	Xmas Is. Shear	1			light patches on proximal portion of dorsal aspect of wing. rest dark.
	Pteradroma. sm.	1			together
1345	P. externa	1	S		
1354	Blackwing Petrel	1	SE		
1355 6 1402	Wedge-tail	16			7 light phase, 2 dark phase, 1 intermediate, 6 undetermined
	Juan Fernandez Petrel	4			Flock spread out Searching
	Sooty Tern	6			adults
1422	Wedgetail	1	SW		intermediate
1442	Sooty/Noddies	21	S		several showed light underwings.



Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

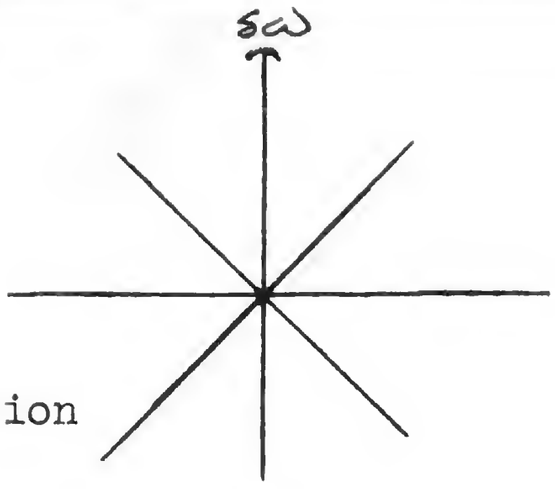
OBSERVERS:

1400-1600 Harrington

Date 9 October

Pg.# 3

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1450	Pom. Jaeger	1	NW		dark phase.
FF	1500	Sooty T.	75 ± 10%			
		Shear-Pet	125 ± 50%			
		Frigate sp.	2			chasing
	1502	JFP	1	SE		heading towards FF
	~~1503~~					
		Wedgetail	9			sitting on H_2O, 2 dark phase
	1505	JFP	1			
	1512	"	1	SE		
	1517	Shear-pet	1	SE		
SF	1520	Sooty Tern	15 ± 10%			
FF	1530	Sooty T.	70 ± 5			
		Wedgetail	5			1 dark
		JFP	60 ± 10			
		WNP	2			
		Bulwer's P.	1			
		Black w. Pet	5 ± 1			
		Pom. Jaeg	1			buffy plumage.
	1532	Sooty S.	1	SE		
	1532	JFP	1			
	1534	"	1	SE		
	1534	Shear-Pet	1			
	1535	JFP	2			
	1536	Wedge-tail	1	SE		
	1547	JFP.	1			
	1547	Shear-Pet	2			
	1550	Shear-Pet	1	S		probably sooty/slender
	1555					skipanters rainsquall
	1605					" leaves "
	1606	JFP	1	NE		
	1608	"	1			
	1608	Wedgetail	1	SW		light phase
	1615	JFP	1			
	1645	JFP	1			sitting on H_2O, Molt in Right Primaries #6 or 7
	1720	Sooty/Slender.	23	SE		At edge of Squall
	1722	Bulwer's P.	1			no white seen on underwing.
	1735	Sooty/s/b.	1	SE		white on underwing
C	1758	Spotted Sandpiper	1			Landed ~~at sea~~ on ship - collected
	1805	Black-wing pet.	1	S		
	1810	"	1			
TF	1836	Pterodroma	7			3 JFP size 4 BWP size
	1840	Sooty Tern	3			ad.
TF	1843	Shear-pet	25	S		tight group. maybe S/s/b but no arcing
	1843	"	7	S		end diurnal obs. 1857



Ship Direction

1st NIGHT IN NORTHERN GRID

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

SPECIMEN or NOCTURNAL

OBSERVERS:
1800-55 Balcomb
2100-0000 Gould
0001-0300 Harrington

Date 9 oct, 1966
Pg.# 4
10 oct 1966 #1

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
857					Sunset - begin nocturnal observations.
1900	Sooty tern	12±3	S		
	Shear-pet	50	S		light too poor to determine species.
x2 55					heavy rain
2305					rain stopped
2310					turned on starboard cargo light
2312	Bird	1			pure white below, did not call, tropicbird size, Probably tropicbird
2315					rain - there has been a lot of lightning on horizon for the last hour.
2321	Shearwater-Petrel	1			flying around light in rain all white ventral surface
2330	wedge-tail Shearwater	1			dark phase - flew into ship - captured - collected
2330					still raining
2335	Bird	1			in rain
2335	Juan Fernandez Petrel	1			flying around in light, circling often high over ship - still present at 2345
2347					rain stopped
2357	Juan Fernandez Petrel	1			flying about lights
0000	Juan Fernandez Petrel	3			flying about in light - one flew down to water + landed - possibly feeding.
0015	Black-w. Pet.	1			landing on yardarm next to light,
0035	Pterodroma	5			circling high (above masts) around ship. Believed to be
0103	Mottled BWP Petrel	1			all black-wing. pet.
0115					ship passed through rain squall: BWP droped out.
0125	Sooty T.	1			adult.
0135	BWP	1			
0145	Sooty T.	1			ad.
0155	"	1			"

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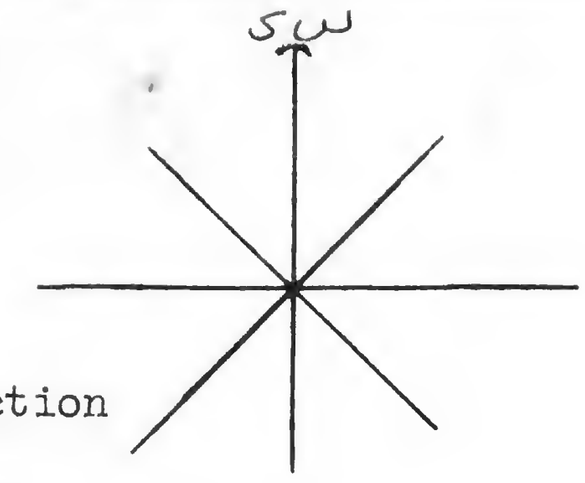


Ship Direction

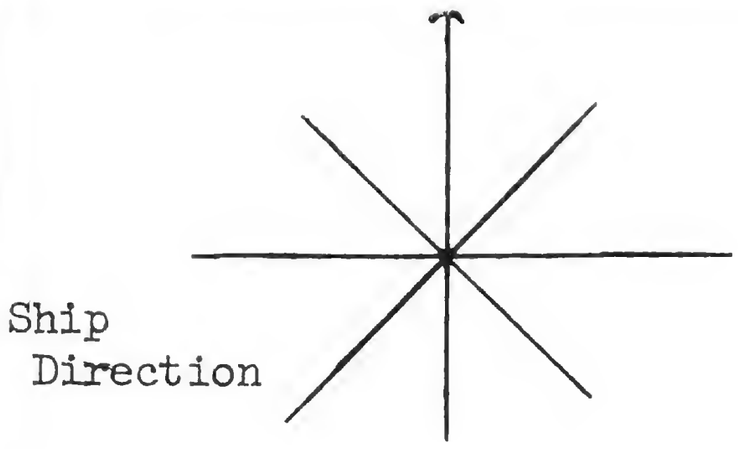
OBSERVERS:
0000-0300 Hurrington

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

SPECIMEN or NOCTURNAL

Date 9-10 Oct.
Pg.# 2

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
0240	Bird	1			
0425	RTTB	1	—	—	S. thrice on H.O
0434	Tern	1			
0510	G. Plover	1			white underneath
0515	Bird	1			
0540	"	1			
0654					Sunrise - nocturnal observations ceaseth



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
0600 → 0800 Redcomb
0800 - 1000 Gould
1000 - 1200 Harrington
1200 - 1400 Lewis

Date 16 Oct, 1966
Pg.# 1

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	0654	~~JFP~~	1			Sunrise - begin Diurnal Obs.
	0659	JFP	1			
	0722	RTTB	1			immature.
	0725	JFP	1			
	0725	White-nack-pet	1			
	0753	Shear-pet	3	S		
	0803	"	4	SW		
	0920	wedge-tail? shearwater	1	NE		
TF	0958	Sooty/slender	17	S		a few were seen well enough to note light underwing. Seen flying through a heavy rainsquall.
	1004	Black-w. Pet	1			in rain squall.
	1010	Petrel	1			
	1011	JFP	1			either WRSP or Bulwers
	1012	Sooty/slender	15 ± 5	S		
	1020	BWP	1			
	1025	Phoenix I/ Tahitian	1	N		
	1025	Shear/pet	1	N		
	1040	P. externa	1			
	1042	"	1			
	1054	P. hypoleuca	1	N		
	1100	JFP	1	N		
	1102	P. externa	1	N		
	1107	Bulwer's	1			
	1110	wedgetail	1			
C	1120	JFP	1			dark phase
	1125	JFP	1			sitting on H_2O. Coll (CBAH)
	1150	Sooty/Slender	14	S		white underwings noted.
	1205	" "	18	S		No white underwing noted
	1207	Pomy Jaeger	1			
	1212	Black-wing Pet.	1	SW		
	1216	wedge-tail	1			
	1223	Fairy Tern	2	SW		Dark Phase
	1224	Shear/pet	1	~~S~~		
	1226	Sooty/Slender	15	SW		some white underwing
	1233	wedge-tail	1	SW		Dark Phase
	1247	Mottled Pet.	1	NE		

0853 released dark phase wedge-tail caught last night band # 645-06301 Blood sample taken -

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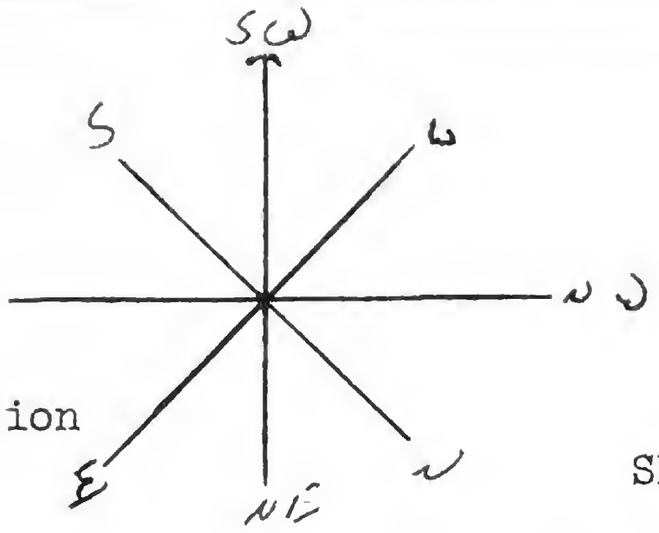

Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
-1400 Lewis

Date 10 Oct
Pg.# 2

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
1250	BFB	1	SW		Red-foot booby
1307	Mottled Pet	1	⊙		
1317	" "	1	SW		
	Sooty/Slb.	4	SW		No white rig underwing
1327	Phoenix/Tuhatim	1	SW		Davis Phase
1329	wedge-tail	1	⊙		
1336	" "	1	NE		Davis Phase
1426	White-neck. pet.	1	NE		
1510	P. externa	2	⊙⊙		sitting on water - then SW.
1525	Juan Fern. Pet	1	⊙		5 misses by
1535	"	1	SE		
1557	P. externa	1	⊙		
1632	Sm. Pterodroma	1	S		
1635	Pterodroma	1	SW		
1635	P. hypoleuca	1			
1635	Sm. Pterodroma	1			
1635	white-rump Storm Petrel	1			
1650					change course to NW
1705	JFP	1	S		
1705	BWP	1	S		
1706	Terntep	1	S		possibly a jaeger.
1710	BWP	1	SE		
1720	JFP	1	S		
1729	Black-wing Petrel	1	⊙		
1744	White-rump Storm Petrel	1	⊙		
1744	Sm. Pterodroma	1	NW		
1745	" "	1	SW		
1759	P. hypoleuca	1	⊙		
1759	P. hypoleuca	1	NE		
1810	Sooty/Hender.	2	S		
1815	"	1	S		
1815	"	1	S		

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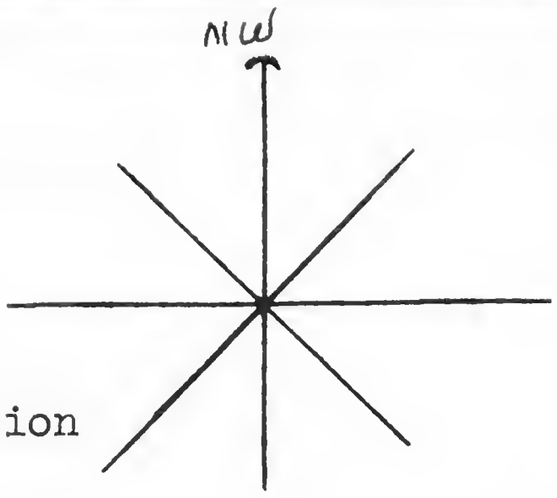


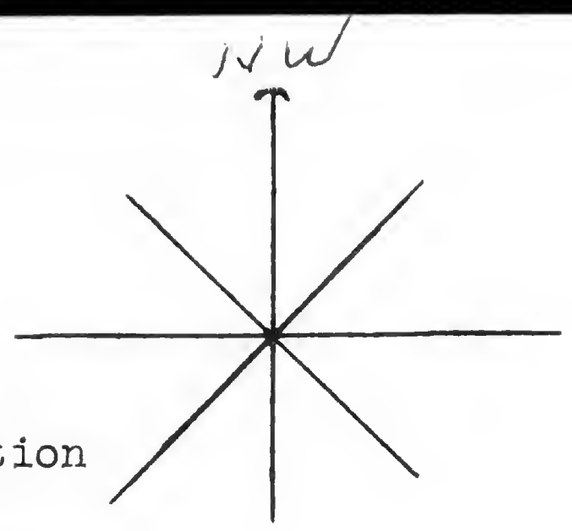
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
1800-2100 Harrington

Date 10 Oct. '66
Pg.# 3

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
1922	WRSP	1	S		
1840	Small Pterodroma	1	〃		
1847	Phoenix/ Tahitian Petrel	1	W		
1852	Long-T. Jaeger	1	S		
1905	BWP	1	〃		
1906					SUNSET



Ship Direction

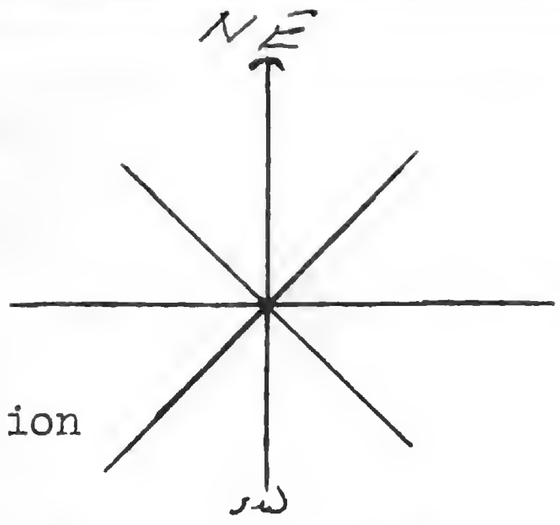
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

SPECIMEN NOCTURNAL
or

OBSERVERS:
1900-2100 Farrington
2100-2400 Lewis
2400-0300 Balcomb
0300-0600 Gould
0600-0715 Lewis

Date 10-11 Oct.
Pg.# 1

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
1906					SUNSET clumsy comes to NE
2136 - 2220 ~~+030~~ 2310 ~~+10~~	Shear/Pet Bird	1			white undersides small
0030	Bird	1			BWP ?
0104	11	⓪			
0238	Sooty/Fair	—			unless my ears are playing tricks, I heard one. I thought so about twenty minutes earlier, too - but less certain then.
0700	Sooty/S16	1	SE		No white in underwing



Ship Direction

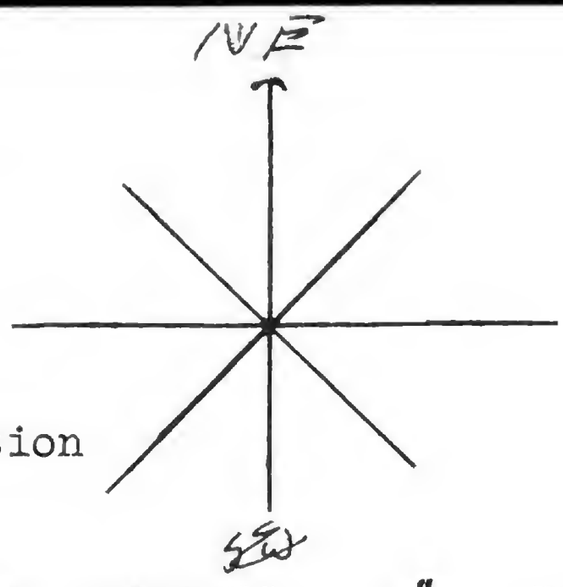
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

0715-0800 Lewis

Date 11 October
Pg.# 1

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	0715					Sunrise
	0721	RTTB	1	@		our ship
	0730	BWP	1	SW		
	0744	Sooty/Slb	1	SE		No white in underwing
	0810	Jaeger sp	1			
	0836	RTTB	1	S		Pomarine or parasitic
TF	0840	Sooty/Slend.	~~15~~ 10			sitting on H_2O
C	0900	RTTB	1	S		
	0930	Sooty T.	1			Coll (BAH) Flying over ship
	0940	Wedgetail	1	NE		adult,
	0946	Sooty/Slend.	11	NE		dark phase
	0950	Mottled P.	1	SE		all had dark underwing — good light.
	1005	Red-tail Tropicbird	1	S		
	1007	Red-tail Tropic bird	1	@ on H_2O		collected Ken Balcomb - pinkish plumage
	1015	Sooty/a Slenderbill Shear	1	S		while ship maneuvering for downed tropicbird
	1120					no arching, low to water, probably slender-billed underway after picking up bird
	1154	Black-wing Petrel	1	W		
	1154	Sooty-Slender-billShearwater	1			
	1212	Tropic bird(?)	1	@		way out
	1246	RTTB	1	@		sitting on the water.
	1303	Tropic bird	3	@		
	1303	Mottled-pet.	1	SW		
	1312	"	1	S		
	1315	"	1	@		
	1328	Sooty/Slbill Shear	1	SW		dark underwings. beautiful dark bird.
	1338	Mottled petrel	1	S		
	1340	Sooty/Slbill	1	S		
	1351	Mottled pet	1	S		
	1355	Sooty Slbill shear	3	SSE		
	1410	" "	1	SE		light underwings
	1417	RFB	1	SW		Fm.
	1417	Sooty/Slb	4	SE		some white in underwings
	1546	" "	18	SE		" " " "



Ship Direction

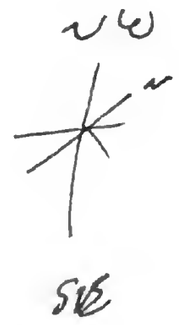
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

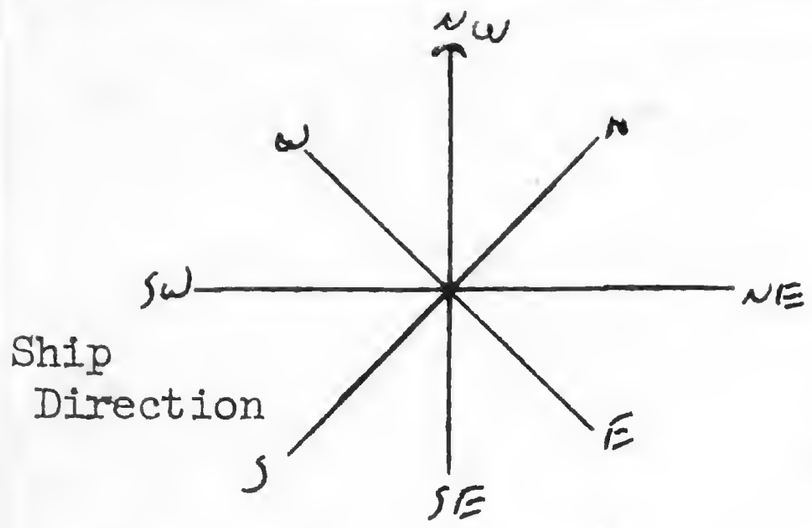
OBSERVERS:

1600 - 1800 Harrington

Date 11 Oct.
Pg.# 2

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
1555	Mottled Pet	1			
1600	mottled	1	S		
1615	Black-w. Petrel	1			
1627	Bw Pet.	1			
1645	sheat/pet.	1	S		
1647	sooty/slend.	1	S		
1647	Pterodroma sp.	1			adult.
1704	RTTB	1			collected by B. Harrington
1705	Black wing Petrel	1			
1715					change course to NW
1720	Pterodroma	1			
					1722 underway after picking up downed bird
1730	RFB	1			Ad light Phase - Red-footed
1731	Pterodroma sp.	1	SE		dark underwing. P. externa - size. light belly & Breast. Pterodroma. like flight.
1735	Mottled Pet	1	SW		
1745	Bw P	2			
1746	Wedgetail	1	N		dark
1806	Sm. Pterod-roma	2			
1807	Bulwers	1			
1818	Sooty/Slender	1	SE		
1819	" " 6:11	1	SE		
1824	Juan Fernandez Petrel	1			
1824	Black-wing? Petrel	1			
1833	white rump storm Petrel	1			
1840	Black-wing Petrel	1	UE		
1841	Sooty/sl. billed Shearwater	1	S		
1945	" "	1	S		
1948	Small Pterodroma	1	N		
1948	Juan Fernandez petrel	1	SW		
1854	Sooty Shearwater	1	S		silver wing flashes obvious





Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
1800-2100 Gould

Date 11 October 1966
Pg.# 3

1906 Sunset

TIME	SPECIES	#	SPECIMEN or DIR. BAND NO.	REMARKS
1917	Shear-Pet	1	S	sooty/slender billed or mottled Petrel by flight.
2205	"	1		Lots of feed in the water squid or sm. fish
				2200 ⇒ 2207
2215	RTTB	2		sitting on water
2235	Pterodroma	1	-	Small light underneath
2240				
2240				myriads of bioluminescent jellies and some squid are around and have been since 2200
2317	Bird	1		
2335	"	1		
0023	Tern ?	1		
0113	Bird	1	SE	Low To H_2O white underneath
0145				Light out
0240				Light on
0350	Bird	1	—	
0400	Black-w Pet.	1	—	
0430	Bird	1	—	seen by watch flying over radar
0545	Bird	1	—	mast

(continued)

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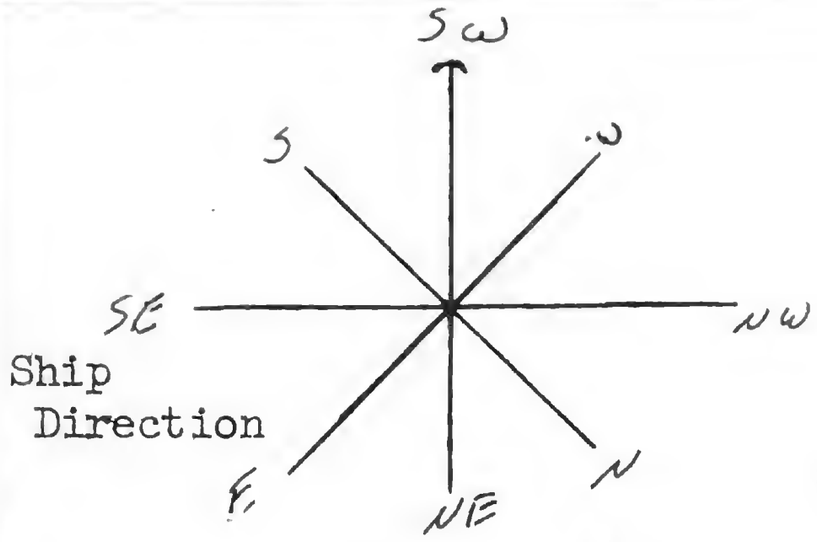

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
0600-0800 Gould

Date 12 October '66
Pg.# 1

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
0735	Pt. externa	1	O		apparent sunrise ca. 0718
0756	Black-wing? Petrel	1			searching could have been Cooks.
0804	Pt. externa	1	S		
0815	Juan Fern. Pet	1	S		
0824	Sooty/Slbill Shear	1	S		very prominent white underwing
0829	"	1	S		white underwing.
0837	Black-wing Pet	1			
0850	Juan Fern. Pet	1	SW		
0850	"	1			
0910	Shear-pet	2			white underneath
0916	Sooty/Slbill	1	SW		white underwings
~~0919~~					
0921	"	2	SW		"
0937	"	1	SW		"
0947	"	1	SW		"
1005	Black-wing	1			
1008	P. externa	1	S		
1017	Sooty/Slbill	11	SW		
1017	Shear/Pet	1			white underneath
1019	Bulwer's Pet	1			
1020	wedge-tail	1	S		Dark, Phase
1021	Sooty/Slb.	1	SW		
1023	" "	1	SW		No white in underwing
1027	Golden Plover	2			circling Ship
1027	Sooty/Slb	25±5	SW		
1028	Shear/Pet	1			white underneath
1036	Black-wing P.	1	NW		
1039	Black-wing P	1	N		
1042	Sooty/Slb	1	SW		white in underwings
1057	" "	1	SW		
1057	Golden Plover	2			~~collected~~ circling Ship
1110	" "	3			Probably same as 1027 Total of 5 Birds
1125	Sooty Tern	1			Imm
1128	Sooty/Slb	1	SW		1 white underwing
1147	Frigate Sp.	1			sitting on H_2O
1149	BWP	1	N		
1152	Sooty/Slb	17	SW		No white in underwings
1155	" "	1	SW		" " " "
1156	"	1	S		white underwing

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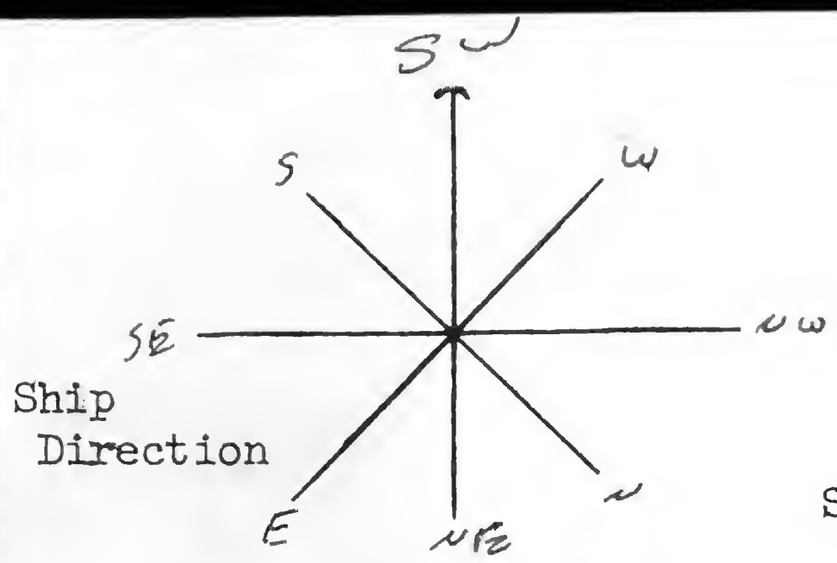

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
1200-1400 Harrington

Date 12 Oct
Pg.# 2

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1210	Golden Plover	1	OO		calling.
	1220	JFP	1	NW		
	1220	BWP	2	OO		
	1232	Sooty/Slender.	1	SW		
	1300	Sooty T.	1	NE		ad.
	1302	P. externa	1	O		
	1310	Sooty/slend.	1	S		
	1318	"	1	SE		
	1318	WESP	2	W		
	1320	Pale-foot Shear.	1	S		well observed: slow, heavy wingbeat, white bill
	1325	Bulwer's	1	E		
	1332	mottled P.	1	S		
	1336	BWP	1	O		originally on water
	1342	Shear/pet	2	S		either mottled or Sooty/slender.
TF	1345	Sooty/Slender.	5	SW		
	1355	Sooty T.	1	SE		imm.
	1402	Bulwers Petrel	1	SW		searching
	1410	Sooty/Slender Bill Shearwater	14	S		several showed prominent silver wing patches
						change course to NW at 1415
	1417	Sooty/Slenderbill Shearwater	1	?		whitish irregular areas under wing
	1510	Golden Plover	1			circled ship, calling once
	1558	Golden Plover	1			circled ship, calling once
	1620	Red-tailed tropic bird	1	O		
	1642	Dian Fern. Pet	1	O		sitting on water.
	1655	Xmas Is. Shear.	1	O		let me check w/ someone for sure.
	1714	Golden Plover	1	O		circled ship twice
	1714	Cooks Petrel?	1	O		
	1719	Shear. Pet.	1	N		
	1724	P. externa	1	N		
	1725	"	1	SE		
	1736	Frigatebird	2	O		
	1736	"	1	O		
	1736	mottled pet	1	SE		
	1736	bird	1	O		with frigates.
	1743	Dian Fern. Pet	1	SE		
	1751	" " "	1	E		

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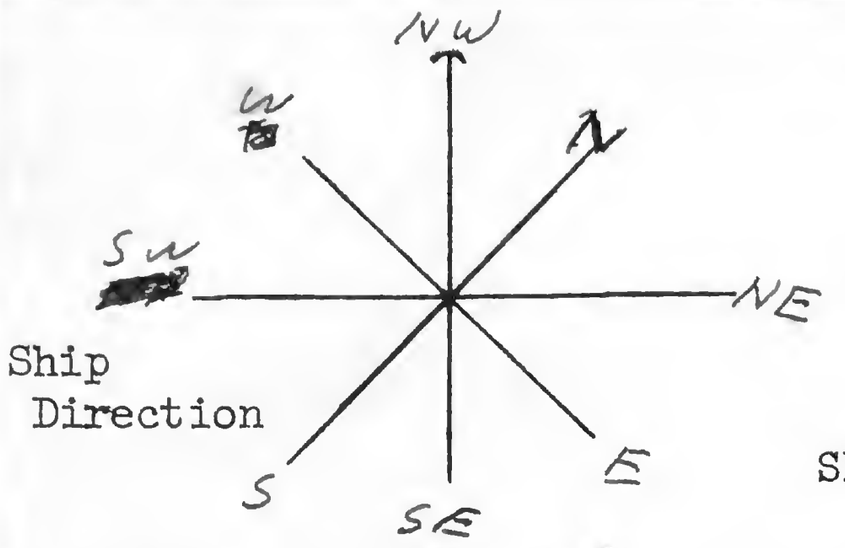
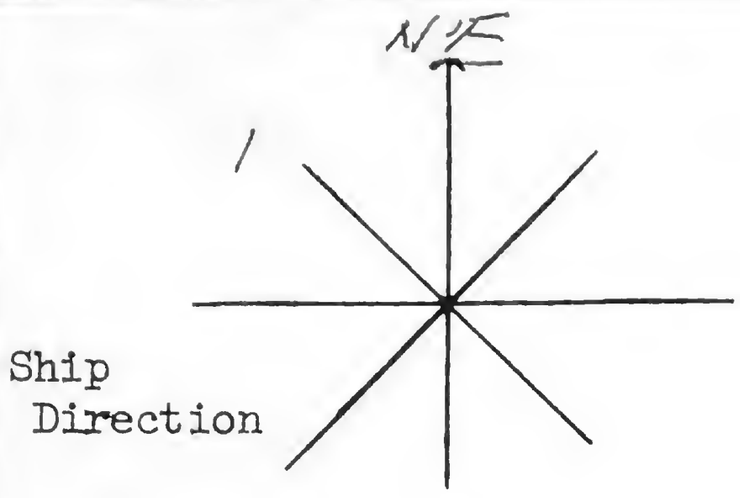


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E
Sunset 1715

OBSERVERS:

Date 12 Oct 1966
Pg.# 3

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
1752	Sooty/Sib	1	S		
1754	Bird	1	—		
1802	Storm Pet	1	S		couldn't see rump.
1805	Mottled Pet	1	SW		
1811	Sooty/Sib.	1	SE		
1812	P. Externa	1	E		
1815	WRSP	1	SE		very broad White-rump.
1829	Mottled Pet	1	SE		
1836	Pterodroma	1	SE		
1840					change course to NE
1841	Sooty/Sib	5	SE		white underwing
1842	" "	1	S		white underwing
1857	RTTB	1	@		Ack Following Ship
1915					Sunset



OBSERVERS:

18–2100	TJL
2100 2400	BAH
0000–0300	PG
0300–0600	KB
0600–sunrise	BAH

Date 12 Oct

Pg.# 1

Nocturnal Observations

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
1915					Sunset
2100	Sooty Tern	1			heard call
2140	Bird	1			
2205	GoldenP	3			believed to have been setting on the water.
2206	shorebird	1			not golden P.
2232	Sooty T.	1			ad.
2305	Bird	1			
2325	Shear-pet	1			small as or smaller than Black-w. Pet.
					13 October
0100	Sooty Tern	1			heard calling (twice) in distance 0000-0300 Gould
0445	Bird	1	S		flying at ca 40'
0543	"	1	SW		
0650	sooty/slend or mottled	1	SE		
0652	sooty/slend.	1	SE		
0659	"	1	"		
0715					SUNRISE

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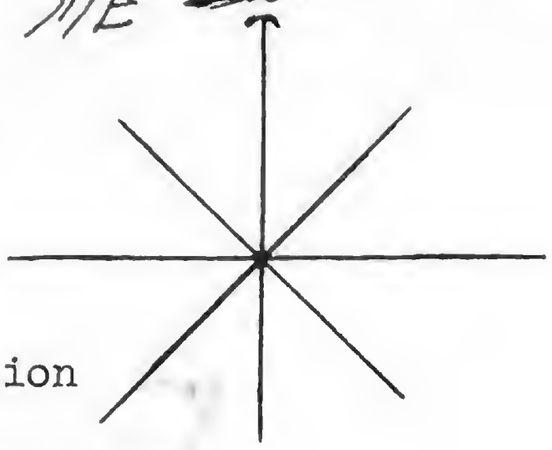
NE



Ship Direction

OBSERVERS: sunrise - 0800
Harrington
Lewis 0800 - 1000

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

Date 13 Oct. 1966.
Pg.# 1

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
0715					SUNRISE
0720	~~Rexterma~~	~~1~~			~~D.~~
0120	R. externa	1	S		
0724	Sooty/Skuder	1	SE		
0740	"	1	SE		
0741	Shear/pet	1	SE		
0745	RTTB	1			landed on HO
0802	Sooty/Slb.	1	SE		
0803	Bird	1	—		
0807	JFP	1	SE		
0814	P. externa	1	SE		
0817	JFP	1	—		Following ship
0827	JFP	1	NE		
0830	Golden Plover	1	E		circling ship
0848	P. externa	1	E		
0910	White-necked Petrel	1	NE		
0914	BWP	1	NE		
0918	Mottled Pet	1	SW		
0924	P. externa	1	E		
0930	Sooty/Slb	3	SE		No white in underwing
0934	wedge-tail	1	E		light phase
0938	Jaeger	1	NE		
0953	Sooty/Slb.	1	SW		No white in underwing
0953	Shear/Pet	1	—		
0956	Bird	1	—		
0958	Sooty/Slb	1	SW		No white in underwing
1004	"	1	SW		
1006	mottled petrel	1	E		
1010	" "	2	S		
1035	wedgetail	1	E		H. phase.
1043	P. phaeopygia	1	SW		
1057	wedgetail	1	NE		
1057	Shear-pet	1	E		
1057	"	1	E		
1057	"	1	E		
1115	"	1	E		
1119	Sooty/Slb/11	1	S		dark underwing
1129	mottledpet	1	SW		
1130	"	1	SW		
1130	Sooty/Slb/11	1	E		
1134	P. Phaeopygia	1	E		

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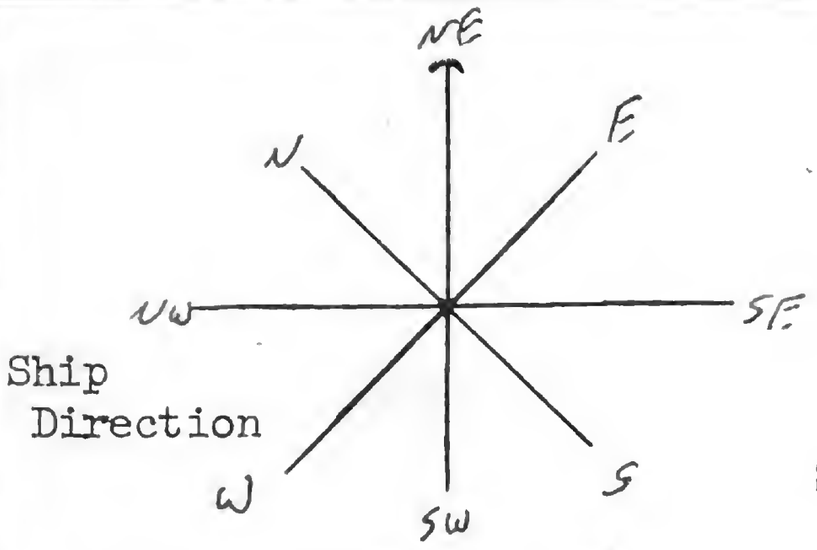
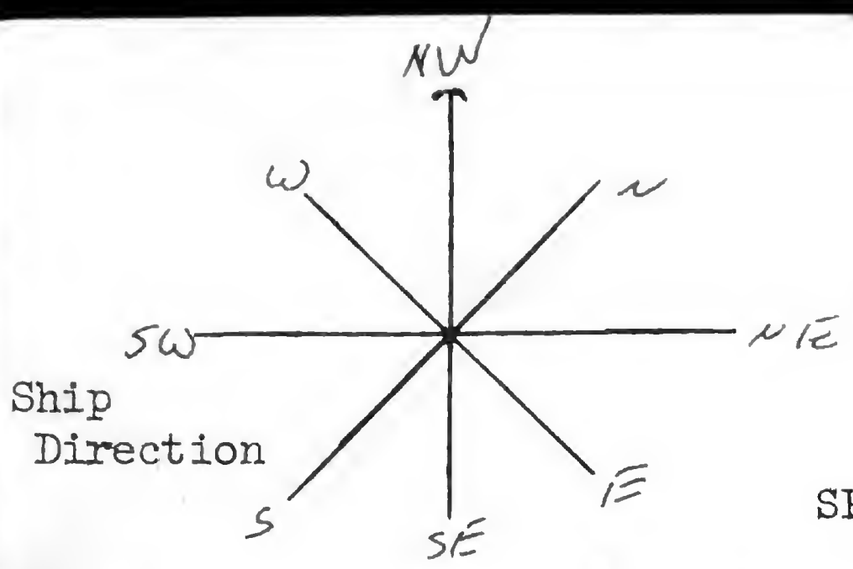


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
1200-1400 Gould
1400-16 Harrington

Date 13 oct
Pg.# 2

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
1037	Mottled petrel	1	SE		
1137	Shear-pet	1	NE		
1145	Pale footed Shear	1	SE		
1147	Wedgetail	1	N		lt phase.
1155	Storm pet	1	E		
1210	Cook's ?Petrel	1	SE		
1213	Frigatebird	1	⊖		feeding then flew SE watched for ca 5 min.
1219	Mottled Petrel	1	S		
1235	Shear-Pet	1	NE		possibly light phase Wedge-tail
1245	Great Frigatebird	1	⊖		Ad ♂
1253	Wedge-tail Shearwater	1	N		light phase
1300	Juan Fernandez Petrel	5	⊖		searching flock
	white-neck Petre	1	⊖		
	Common Wedge Tern	1	⊖		
1303	Juan Fernandez Petrel	1	⊖		
1304	mottled Petrel	1	S		travelling
1321	Golden Plover	2	(SE)		traveling - then came back going W what we are probably the same two came back at 1327
1348	Kermadec Petrel	1	⊖		sat on water - light phase
1352	Black-winged Petrel	1	W		
1352	Sooty/Slender bill	1	S		
1353	white-neck Petrel	1	NE		
1358	G. Frig.	1	♂♀		ad ♀
1405	Mottled P.	1	S		
1410	Black-w Pet	1	♂♀		
1422	Sooty/Island.	1	S		
1423	BW2	2	N		change course to NW
1430					
1430	Golden P.	1	♂♀		
C 1431	P. externa	1			C BHH EKB
1431	Shear Pet	1	S		



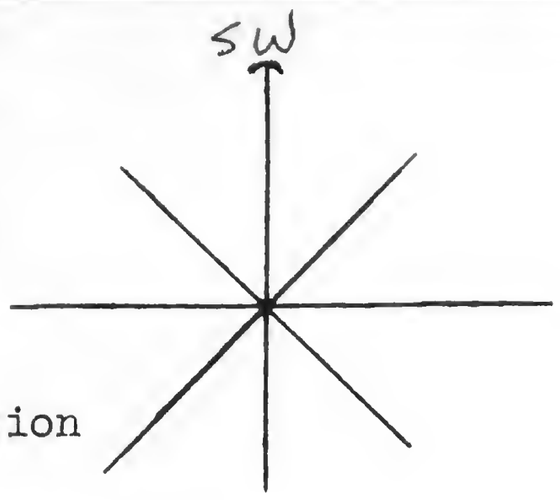
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
1400-1600 Harrington

Date 13 Oct 1966
Pg.# 3

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
1515	G. Frig	2			ad ♂, ad ♀ circling high
1522	BWP	1			
1535	mottled	1	S		
1536	Sooty/Slend	1	S		
1610	JFP	1	SE		
1626	JFP	1	SE		
	Shear/Pet	1	SE		
1627	Wedgetail	1	SE		Dark Phase
1641	Sooty/S/b	1	SE		light underwing
1645	" "	1	SW		" "
1654	M. Head Pet	1	SW		
1655	P. externa	1	SE		
1705	Pterodroma	1	S		
1715	Pterodroma	1			
1720	Pterodroma	1	S		
1723	P. externa	1			
1729	Sooty/S/b	1	S		
1736	" "	1	SE		
1739	Pterodroma	1	SE		
1740	Sooty/S/b	1	SW		No light underwing
1745	" "	1	SE		Light underwing
1745	Mottled Pet	1	SE		
1746	Sooty/S/b	1	SW		
1748	BTTB	2			Sitting on H_2O
1803	Juan Fern. Pet	2	S		
1805					Change course to SW
1813	Juan Fern. Pet	1	SW		
1813	"	1	SW		
1813	"	1	SW		
1825	Wedgetail	1	S		It phase.
1832	"	1			"
1832	Bird	2			up high.
1837	Sooty S/b ill	1	SW		
C 1837	Juan Fern Pet	1			shot by everybody
C 1845	Common N. T.	1			coll. KCB
1845	Wedgetail	1			light
1857	Juan Fern Pet.	1			
1859	White-rump S.P.	1			

1908 Sunset
Cease additional Obs.



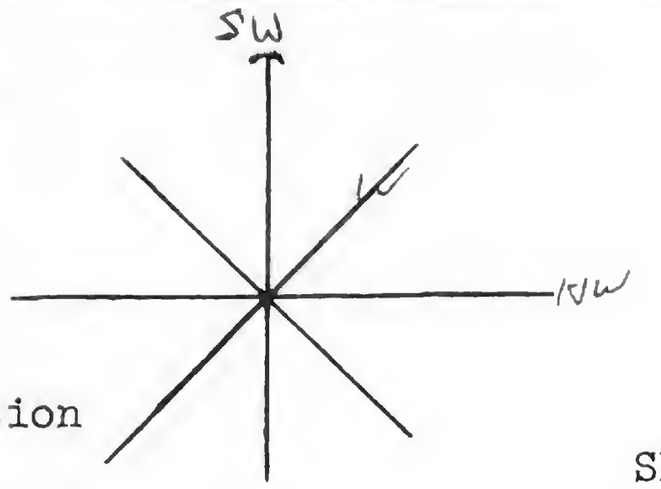
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E
NOCTURNAL

OBSERVERS:

Date 13/19 Oct, 1966
Pg.# 1

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
1908					Sunset - commence nocturnal watch.
1915	Golden Plover	1	⊖		calling
1915	Juan Fernandez Petrel	1	⊖		
2040	Tropicbird	1			sitting on water
0458	Bird	1	S		probably shearwater - low to H_2O, flashed white underneath
0724					Sunrise - cease nocturnal obs.

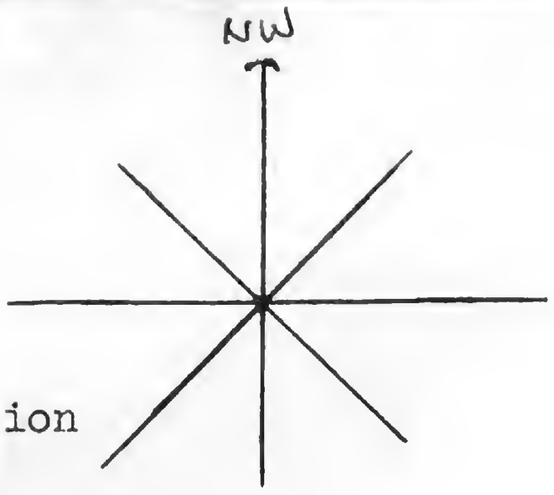


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
0600 → 0900 Bolwars
0900 → 1000 Gould
1000 → Harrington

Date 14 OCTOBER 66
Pg.# 1

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	0724					Sunrise - commence diurnal watch
	0730	Common Noddy tern	1	◎		
	0735	Juan Fern Pet	1	SW		
	0735	"	1	SW		
	0737	"	1	SW		
	0745	"	1	◎		
	0746	"	1	SW		
	0753	"	1	◎		joined bird of 0746
	0811	"	1	SW		
	0845	"	1	NE		
C	0858	Red tailed T.B.	1	◎	F40210	sitting on water coll. KCB & BAH
	0859	G Frigate	1	◎		
FF		Terns	50	≈		
		Shear pet	75	≈		
	0859	mottled pet	2	◎		headed S
	0920	Juan Fern Pet	1	NE		
	0920	P. externa	1	SW		
	1020	Black-wing Petrel	1	◎		
	1038	sooty/slender	1	E		light underwing. Probably direction altered to skirt ship.
	1120	"	1	SE		
	1132	Fairy Tern	1	NE		
	1157	P. hypoleuca	1	S		
	1202	Mottled Pet	1	S		
	1202	Bolwars Pet	1	◎		
	1204	Sooty/Slb	1	SW		light underwing
	1206	WTTB	1	◎		following Ship Aft
	1216	JFP	1	SW		
	1217	"	1	S		
	1220	BWP.	1	SW		
	1245					change course to NW
	1257	BWP	1	SW		
	1301	Sooty/Slb	1	SW		
	1806	JFP	1	◎		
	1325	Sooty/Slb	1	SE		
	1342	P. externa	1	◎		
	1410	Bolwars Pet	1	◎		

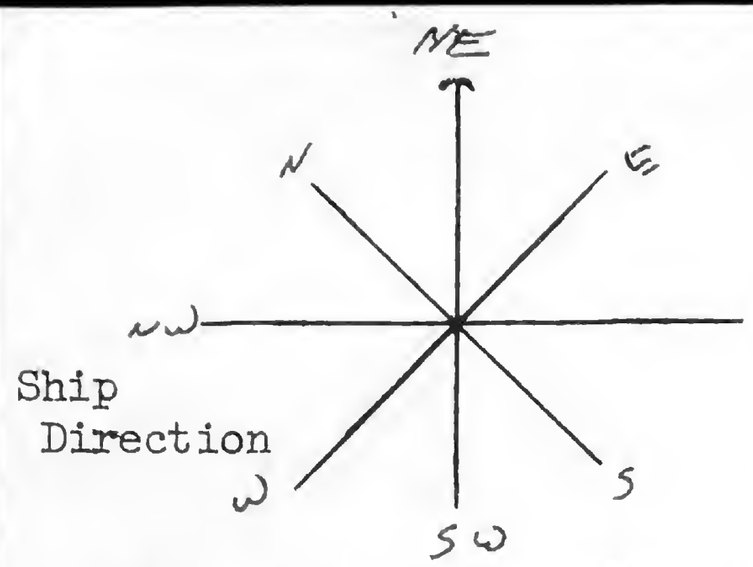


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
1900 → 1600 BALCOMB
1600 — Gould
1800 — 1935 Harrington

Date 14 OCTOBER 1966
Pg.# 2

	TIME	SPECIES	#	SPECIMEN or DIR. BAND NO.	REMARKS
	1452	mottled petrel	1	SW	
	1502	Sooty / Slbill	2	SW	
	1510	"	1	SW	
	1514	"	1	SW	
	1517	mottled petrel	1	SW	
	1518	"	1	SW	
	1524	Sooty / Slbill	2	SW	
	1531	Black wing - Pet.	1	N	big fish jumped 100 yds from ship.
C	1544	Juan Fern. Pet	1	◎	call T.J. Lewis.
	1544	Black wing pet	1	◎	
	1557				flock sighted
	1615				drifting near flock waiting to pot skiff over.
	1620	Pink footed Shearwater	1		headed towards flock - light belly flat mottled on flanks & sides, white underwing with irregular dark border, dark above, large pale bill - moulting on dorsal surface
	1620	mottled petrel	1	S	
	1630	mottled Petrel	1	S	
	1640	Black-wing Petrel	1	○	
	1655	P. externa	1	○	
	1651	golden plover	1	○	
	1700				resume course
		Flock 1557 to 1700			actively feeding, large predatory fish beneath flock
		Sooty ? Tern	150±25		
		G Frigatebird	12 1 ♀		at least 1 ♀
		Shear-Pet	10+		
	1715	Golden plover	1	◎	
	1725	mottled petrel	1	SW	
	1726	Sooty / Slbill	1	S	light underwings
	1728	mottled petrel	1	S	
	1728	Black-wing pet	1	◎	sitting on water - then NW
	1737	Golden Plover	1	◎	
	1745	Bw P	1		
	1745	mottled	1 →	S	
	1745	Pterodroma sp.	1	—	

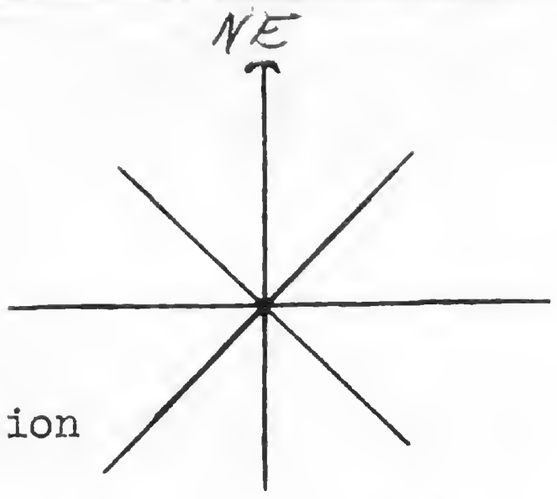


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E DIURNAL

OBSERVERS:
1600 → Gould

Date 14 Oct '66
Pg.# 3

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
1755	P. externa	1	S		
1757	mottled Petrel	1	S		
1802	Shear-Pet.	2	S		
1803	P. externa	1	S		
1807	Cook's Petrel?	1	N		like Blackwing except on outer wing border, not as dark or as wide or as sharply defined - fairly close P.R.
1814	mottled P.	1	S		
1814	"	1	S		black axilary
1830	WTB	1			" "
1831	WRSP	1			Flying over; Adult
1840	Pterodroma sp.	1			
1845	Bulwers	1			
1845	WRSP	1	NE		
1845	P. Externa	1	S		
1845	G. Frig	1			
1846	Mottled Pet.	1	S		
1850	G. Frig	1			
1852	Pterodroma.	1			
1852	Mottled P.	1	S		
1915					sunset: close observations



Ship Direction

0718 Sunrise

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

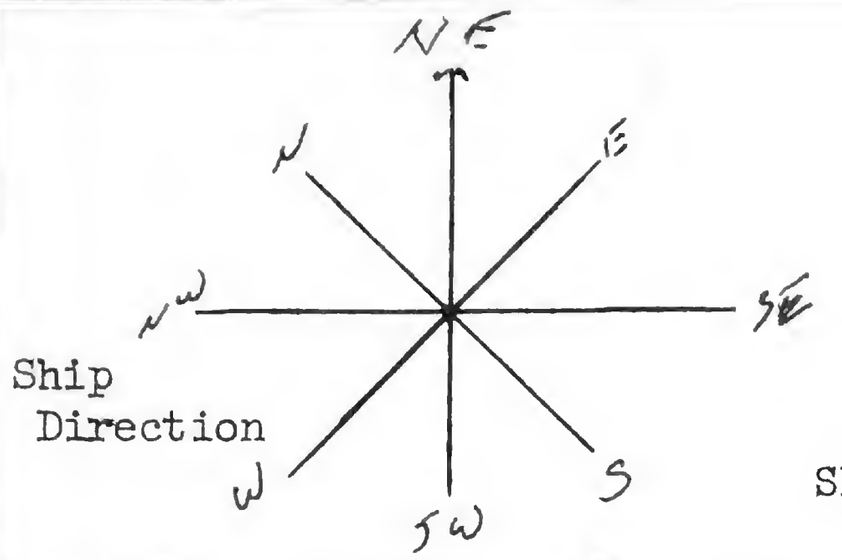
SPECIMEN NOCTURNAL
or

OBSERVERS:
1915 — 2100 Harrington

Date 14-15 Oct.
Pg.# 1

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
1915					SUNSET: BEGIN OBSERVATION 1917
2040	Sooty T.?	1			Think I heard one adult.
2145.	Shear/Pet	1			
2150	Bird				Cargo light just Turned on
2206	"	1			
2313	Shear/Pet	1			Light underneath
2351	" "	1			
0135 → 0150					Light rain squall
0715	Small Pterodroma	1	W		
0718					Sunrise

1917 - 2017 = 0
2017 - 2117 = 1
2117 - 2217
2211 - 2317
2317 - 0017
0217 - 0117
0117 - 0217
0217 - 0317
0317 - 0417
0417 - 0517
0517 - 0617
0617 - 0717



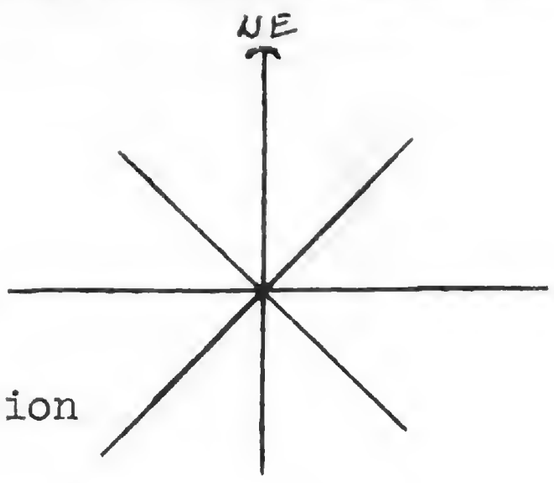
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
1000 - 1200 - Gould

Date 15 October
Pg.# 1

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	0718	—				Sunrise
	0725	Shear/Pet	1	—		
	0730	Sooty/Slender	1	S		
	0732	RTTB	1			
	0733	BWP	1	NE		
	0742	"	1	N		
	0747	WTTB	1			following ship's Ad
	0750	Shear Pet	1			
	0755	Sooty/Slender	1	S		
	0759	P. externa	1	NW		
	0807	Golden P.	2			
	0849	BWP	1			
	0900	—				2+ spinner porpoise
	0910	Golden P	1			
C	0910	RTTB	3			adults, 1 coll. (BAH)
	0920	Wedgetail	1			chasing injured golden Plover
	0940	P. carnipes	1	SE		
	0941	JFP	1			
	0945	Bulwer's	1			
	0951	JFP	1			
	0954	Mottled	1	S		
	0955	"	1	S		
	1000	Juan Fern Pet	1	SW		
	1005	Golden Plover	1	NE		droopy leg
	1025	Red-tail Tropbird	1			sitting on water
	1040	Golden Plover	3			
						1045 - 1050 - rain squall
	1114	P. carnipes	1	S		bill not seen
	1120	Pterodroma	1			
C	1127	Golden Plover	1			collected BAH
	1140	Shear-Pet	1	S		
C	1144	Golden P Lour	1			collected
	1158	Golden Plover	3			while pucking up downed bird
	1200	P. carnipes	1	S		
	1212	"	1			
	1217	Juan Fern. Pet	1			
	1232	RTTB	3			sitting on water



Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
12-14 Balcomb
14 → Lewis
16 → Harrington

Date 15 OCT, 1966
Pg.# 2

	TIME	SPECIES	#	SPECIMEN or DIR. BAND NO.	REMARKS
C	1245	Golden Plover	1		call KCB
	1256	"	1		
	1256	RTTB	1		on water
	1300	Bulwers pet	1		
	1300	Golden Plover	1		
	1302	P. carnipes	1	S	
	1310	Dark-rump pet.?	1		
	1315	Juan Fern Pet	1		
	1355	Golden Plover	1		
FF	1400	Sooty Tern	19		
		Fairy Tern	1		
		Gray-backed Tern?	1		May be parasitic
		Pale-footed Shearwater	1		
		Wedgetail	2		light phase
		JFP	10		
		BWP	1		Immature
		Red-footed Booby	1		Ad Male
		G. Frigate	1		
	1430	JFP	1		
	1445	Goldenplover	1		Circling ship
	1447	JFP	1		Sitting on H_2O
	1507	Pale-footed Shearwater	1	SW	
	1508	Shear/Pet	1	SW	
	1525	JFP	1		
	1533	"	1		
	1548	"	1	SE	
	1554	"	1	S	
	1558	"	1	NE	
	1559	Sooty/Slb	1	SE	light underwing
	1606	BWP	1		
	1606	Sooty/Sldrb.	1	S	
	1607	P. extern	1		
C	1615	Gold. Plover	1		call (O'Brien)
	1623	S/slender	1	SE	
	1626	Wedgetail	1		light.
	1630	S/slenderb.	1	SE	
	1632	JFP	1		
	1645	Wedgetail	1	E	light
	1655	JFP	1		
	1655	S/slenderb.	1	S	

Feeding over Tuna

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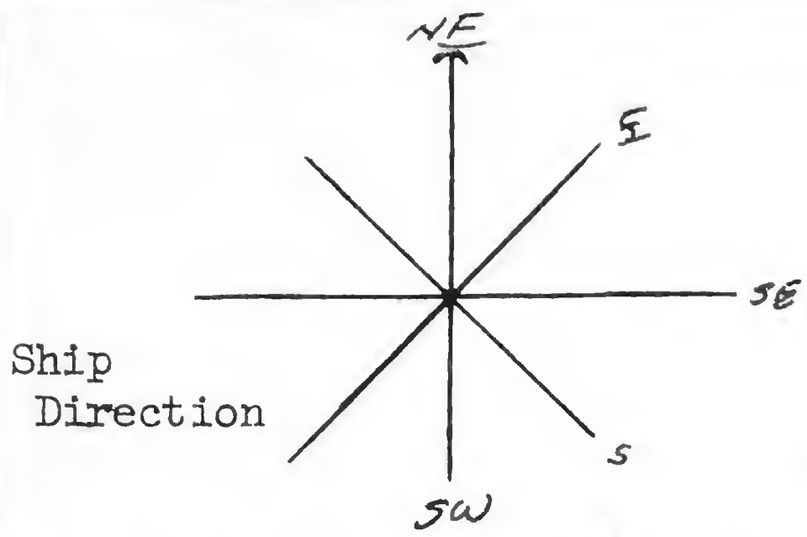


Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

1800 – Gould

Date 15 Oct ~~16~~ 1966

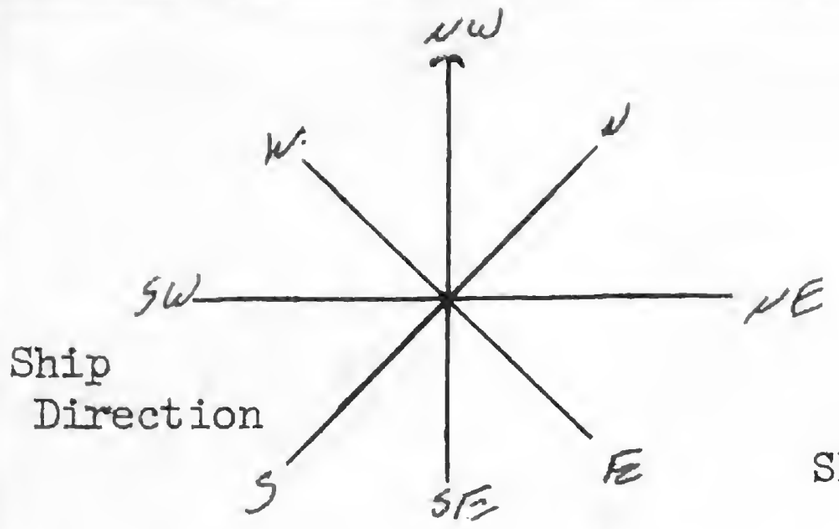
Pg.# 3

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1659	S/slender	1	S		
	1701	"	1	S		
	1720	"	1	S		white underwings
	1723	"	1	S		" " "
	1724	Pterodroma	1	N		
	1725	JFP	1	—		
	1732	Pterodroma	1	—		
C	1738	Golden Plover	2	—		Following ship I collected
	1800	Sooty/Slenderbill	1	—		avoiding ship - white underwing
	1801	Black-wing? Petrel	1	O		
	1810	P. externa	1	O		
	1815	Sooty/Slenderbill	1	S		light underwing, but not silver
	1816	wedge-tail Shearwater	1	L		light phase
	1818	Sooty/Slenderbill	1	S		dark underwing
	1820	Sooty/Slenderbill	2	S		white underwing
	1821	wedge-tail Shearwater	1	L		light phase
	1822	P. externa	1	O		
	1823	Sooty/Slenderbill	1	S		underwing not noted
	1830	mottled Petrel	1	S		
	1830	mottled? Petrel	1	S		
	1832	wedge-tail Shearwater	1	LE		light phase
	1833	Sooty/Slenderbill	1	S		white underwing
	1838	Sooty/Slenderbill	1	S		
	1838	pterodroma	1	W		
	1840	Sooty/Slenderbill	1	S		white underwing
	1845	wedge-tail Sh.	1	O		light phase
	1847	Black-wing Petrel	1	SW		
	1850	Red-tail Tropicbird	1			on water adult
	1852	Sooty/Slenderbill	5	S		white underwing
	1855	" "	1	S		" "

Sooty & slender past ship at 1928 hours

Sunset ca 1900
cease observations

SI-MNH-958-e
Rev. 5-66



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
06-0900 Gould

Date 16 Oct. 1966
Pg.# 1

TIME	SPECIES	#	SPECIMEN or DIR. BAND NO.	REMARKS
				begin observation 0645
				sunrise ca 0719
				light rain falling from 0645 - 0705
0706	Wedge-tail Shear.	6	§	light phase all moving back + forth around the ship for ca 10 minutes - not necessarily together
0710	Juan Fernandez Petrel	1	§	
0715	Pomarine ? Jaeger	1	§	still around at 0728
0716	Juan Fernandez Petrel	1	§	
0719	Wedge-tail Shearwater	2	NE	light phase
0720	" "	1	"	light phase
0728	Juan Fernandez Petrel	1	§	
0730	wedge-tail Shearwater	1	S	light phase
0734	Juan Fernandez Petrel	1	§	
0740	Wedge-tail Shearwater	1	NE	light phase
0745	" "	1	NW	" "
0745	" "	1	§	" "
0746	" "	2	NE	" "
0750	" "	1	§	" "
0755	P. externa	2	§	JFP
0755	P. externa	1	§	JFP
0755	Wedge-tail Shear	1	§	light phase
0803	Juan Fern Pet	1	NW	
0810	Shear - pet	1	NW	
0810	Juan Fern. Pet.	1	@	
0812	Golden P.	1		
0816	Wedgetail	1		lt phase
	Juan Fern Pet	1		
0825	"	2	NW	
0825	"	1	NW	
0825	Wedgetail	1	NW	lt. phase

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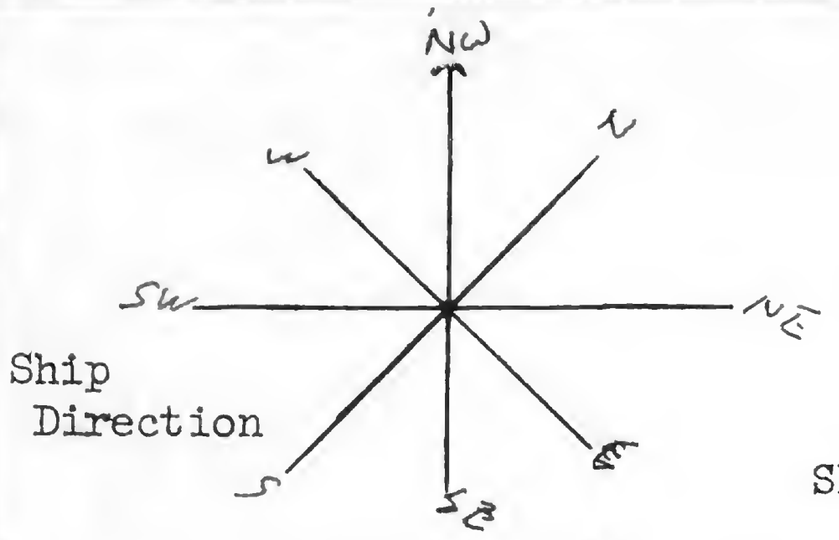


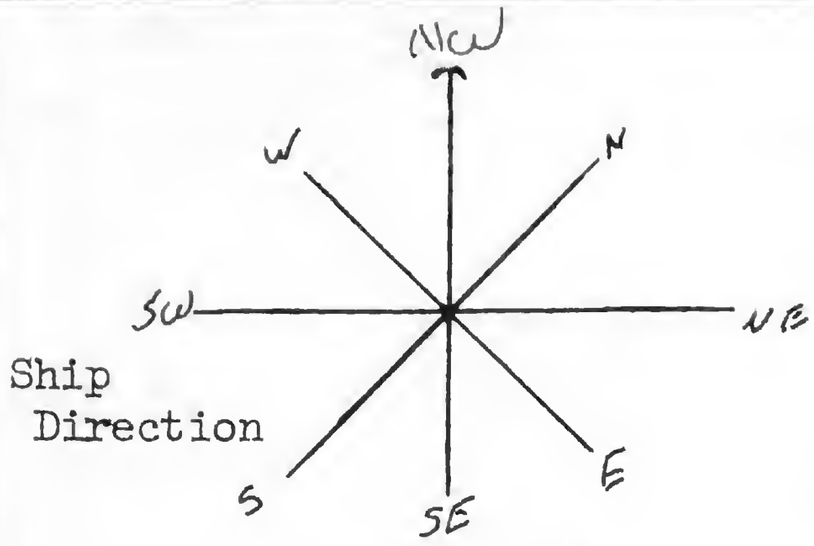
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

0800 - 1800 Balcomb
10 → Lewis
12 — Harrington

Date 16 Oct. 1966
Pg.# 2

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
FF	0829	Frigate sp.	1			
		Shear-pet	15			
	0837	RTTB	1			sitting on water
	0844	Shear-pet	2			
	0847	Golden Plover	1			
	0855	Wedgetail	1	NW		lt. phase.
	0902	Shear-pet	3			
	0912	RTTB	1			sitting on water
	0922	Shear-pet	1			
	0922	Juan Fern. pet	1			
	0925	Mottled pet	2	SE		
	0930	Juan Fern Pet	1			
	0933	Wedgetail	1			dk. phase.
	0936	Shear-pet	3	NW		
	0938	P. carnipes	1			
	0945	Wedgetail	1			lt. phase.
	0945	Shear-pet	3			
FF	0956	Wedgetail	9			lt phase
		Sooty tern	19			
		Fairy tern	1			
	0958	RTTB	1			sitting on water
	0958	Shear-pet	1	NW		
	1000	Juan Fern pet	1	NW		
	1006	" " "	1	NW		
	1009	Black-winged Pet.	1	E		
	1012	JFP	2	NW		
	1025	WBSP	1	E		N. Hawksbill SP - very white rump
	1025	Wedge-tail	1	SE		light Phase
	1029	Mottled Pet	1	SE		
	1032	Shear/Pet	1	SW		
	1035	Wedge-tail	1	SE		light Phase
	1037	JFP	1	SE		
	1043	wedge-tail	1	E		light Phase
	1046	" "	1	SE		" "
	1046	Shear/Pet	1			
	1105					whale (sperm)
	1107	G. Frigate	1			Ad Male feeding
	1111	BWP	1	E		
	1131	"	1	N		
	1134	Mottled Pet	1	SE		
	1140	" "	1	S		
	1147	RTTB	1			Ad sitting on H_2O
	1159	"	1			circling our ship Ad
	1215	wedge tail	2			light. (one sitting on H_2O)
	1255	BWP	1			
	"	"	1			

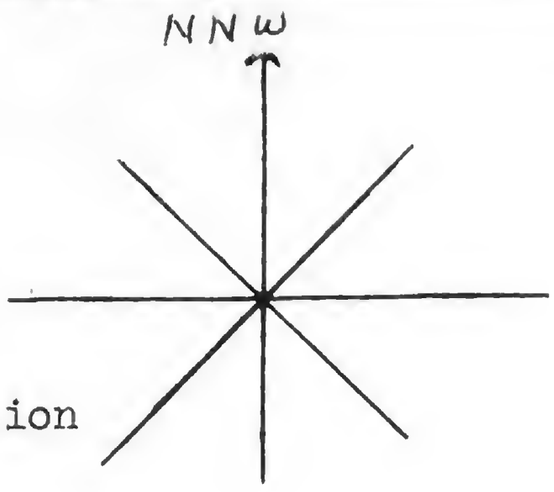


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
1200 – Harrington

Date 16 Oct '66
Pg.# 3

TIME	SPECIES	#	SPECIMEN or DIR. BAND NO.	REMARKS
1302	Wedgetail	1	NE	light
1303	BWP	1		
1308	BWP	1	NE	
1309	Ruddy Turn-stone	1	SW	
1310	Wedgetail	1	NE	light
1340	"	1	NE	"
1400	P. externa	1		
1530	Juan fernandez Petrel	1	S	
1540	Porpoise	10+		
1540	Mottled Petrel	1	?	
1600	Wedge-tail Shearwater	1	NE	
1605	Sooty/Slbill	1	S	
1628	Black-wing pet	1		
1631	Shear-pet	1	S	light belly
1647	Bird	1		
1656	Juan Fern Pet.	1	E	
1705	Bird	1		spotted by watch
1705	Pterodroma sp.	1		
1720	BWP	1	E	
1750	~~Bulw~~ mottled P.	1	S	
1755	Shear/pet	1	SE	
1755	Juan Fern. Pet	1	SE	
1807	" " "	1	SE	
1812	Mottled Pet	1	S	
1815	" "	1	SE	
1815	BWP	1		Molt
1816	Sooty/Slb	1	S	
1825	Shear/Pet	1	S	
1827	Tropicbird	1		
1827	CNT	1		
1835	Wedge-tail	1		light Phase
1835	BWP	1		
1845	Sooty/Slb	1	SW	
1956	Shear/Pet	1	—	
1904				Sunset Clear Azimuth



Ship Direction

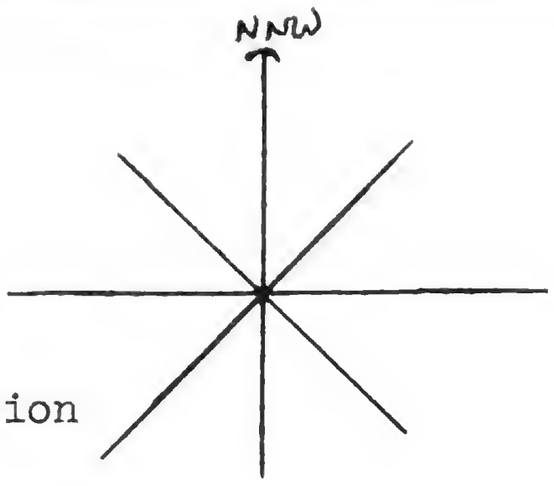
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Sunrise — 0800 BAH
0800 - 1000 LEWIS
1000 - 1200 BALCOMB

Date 18 Oct '66
Pg.# 1

TIME	SPECIES	#	SPECIMEN or DIR. BAND NO.	REMARKS
0715				begin observations
0722	Wedgetail	1	E	light
0731	BWP	1	"	
0734	Golden Plov.	1	"	
0739				SUNRISE
0737	Wedgetail?	1	"	
0738	P. hypoleuca	1	"	
0743	S/Slender	1	S	
0845	G Frigate	1	S	
0846	White-neck Pet.	1	S	ad ♂
		1	"	T.J.L.
0846	BWP	1	"	
0800	Wedgetail	1	NE	light
0805	P. hypoleuca	1	—	
0833	Wedgetail	1	NE	light phase
0837	Bonin Island Petrel	1	SE	
0841	Storm Petrel	1	"	Did not see rump
0955	P. externa	1	S	
0906	Sooty/S/b	2	SW	No white in underwing
0910	Wedgetail	1	SE	light phase
0917	Mottled Pet	1	SW	
0919	Show./Pet	1	—	
0921	" "	2	—	
0422	" "	1		
0930	WRSP	1	SW	very broad white rump
0951	Sooty/S/b	9	SW	white in underwing
1000	Black-wing Pet	1		
1001	Wedgetail	1		lt. phase.
1005	Golden Plover	1		circling ship
1008	Birds -	ca 12	SW	terns I think.
1014	Wedgetail	1	S	lt phase
1016	"	1		"
1025	Sooty/S/bill	1	SE	dark underwings
1027	Black-wing pet	1		
1029	Sooty/S/bill	1	S	
1050	"	1	SW	light underwings
1050	Golden Plover	2		circling ship.
1108	Wedgetail	1	NW	lt phase.



Ship Direction

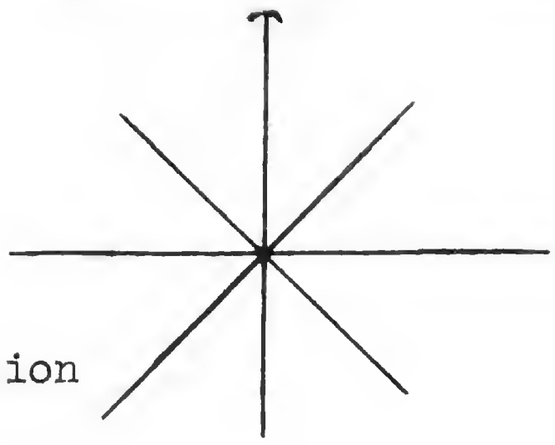
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
1000 -> 1200 BALCOMB

Date 18 OCTOBER.
Pg.# 2

TIME	SPECIES	#	SPECIMEN or DIR. BAND NO.	REMARKS
1115	Shear-pet	1	⊛	light underneath.
1127	Juan Fern. Pet.	1	E	
1142	Golden plover	1	⊛	circling ship
1143	Wedgetail	1	NW	H. phase.
1155	Black-wing pet	1	⊛	
1223	" " "	2	⊛	in close deffinately not P. h. hypoleuca
				1300 - manouvers for General Quarters
1314	Shear-Pet.	1	?	
1342	Golden Plover	1	⊛	
1410				ship underway - slow
1417	WTTB	1		adult circling over ship
1430	Wedgetail	3	NE	★ all light phase
1437	Shear/pet.	1		
1440	S/s lender	1	S	light underwing
1510	Golden Plover	1	⊛	
1512	Wedgetail	1	⊛	light
1513	Black-w. pet	1	⊛	
1525	Wedgetail	1	NE	light
1655	mottled Pt.	1	S	
1601	Wedgetail	1	NE	light phase in light rain — Squall
1610	"	1	N	Heavy Rain light phase — Till
1620				stopped Burning 1620
1625	Blue-faced Booby	1		Ad
1632	Wedge-tail	1	⊛	light phase edge of squall
1639	JFP	1	SW	
1712	Wedge-tail Shearwater	1	⊛	light phase
1717	" "	1	⊛	" "
1814	Juan Fern. Pet	1	NW	
1823	Black-wing pet	1	⊛	
1828	Juan Fern-pet	1	⊛	
1828	Shear-pet	1	⊛	
1845	"	1	⊛	
1847	Wedgetail	1	⊛	H phase
1849	Golden Plover	1	⊛	
1858	~~Shear-pet~~	1	⊛	wedgetail H. phase
1907				sunset close observations

Ship Direction

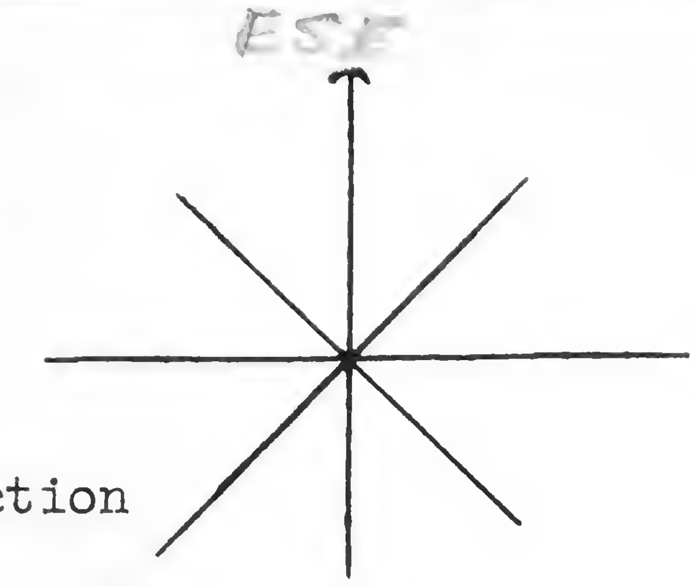


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 18 OCT, 1966
Pg.# 1

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
0742	Bonin Is. pet	too numerous to count			coming very close to ship
0742	Wedgetail	"			
0753	Red-footed Booby	numerous			
0800					BIP very abundant - upwards to 60 in sight at any one time. Appear to be "gravitating" towards SW. Wedgetails numerous - almost entirely light phase, also "gravitating" to SW. RFB passing by frequently. Almost entirely adults. BFB - occasional and imm. Island ca 6 miles due east.
0807	Golden P.	7			first seen flying towards island, then circled ship.
0810	JF Petrel	1			
0813	"	1			
0813	G Frig	1			not a male.
0815					Both Bonin I. and Wedgetails have thinned out considerably. Sun now 25-30° above horizon. Less than 20 BIP in sight at any one time, Wedgetail
0820					<10 Birds in sight at any one time.
0827					4 Red-foot Booby flying ca. SW 3 ad + 1 sub adult otherwise only about 5 birds in sight including 1 Wedge-tail and 1 Bonin Island (light phase)
0830					less than 10 birds in sight at any one time - these about equal number of light phase Wedge-tails and Bonin Island Petrels
0832	P. externa	0			
0837	Brown Booby	3			2 imm + 1 sub adult?
0840	Red-foot Booby	1	Ad		
0840	Wedge-tail Shear	1			light Phase
0840	" "	1			" "
0840	" "	1			" "
0840	" "	1			" "
					Close observations at 0842



Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
0700-0800 Harrington
0800-1000 Lewis
1000-1200 Gould

Date 24 Oct. 1966
Pg.# 1

TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
0705	—				begin observation
0712	Wedgetail	1	NE		light
0716					sunrise.
0722	wedge-tail	1	—		
0723	"	1	[illegible]		light
0725	WRSP	1	[illegible]		
0727	Black-w Pet	1	[illegible]		
0736	Small Pterodroma	1	[illegible]		
0740	WESP	1	[illegible]		
0753	Wedge-Tail	1	SE		light
0801	M. Hld Pet	1	SW		
0806	BW Petrel	1	[illegible]		
0812	Mottled Pet	1	SW		
0814	Wedge-Tail	1	[illegible]		light
0830	Pterodroma	1	SW		
0853	Small Pterodroma	1	[illegible]		
0901	Pterodroma	1	W		
0904	"	1	[illegible]		
0908	BWP	1	[illegible]		
0916	P. externa	1	S		
0919	Small Pterodroma	1	[illegible]		beh. ship
0925	Shear/PT	1	SW		
0932	Wedge-Tail	1	SE		light
0954	BFA	1			Following ship - white rumps
1003	mottled Petrel	1	S		
1005	P. hypoleuca	1	N		
1015	Shear - Pt	1	S		white below
1049	Small Pterodroma	1	N		
1053	Black-wing or Bonin Pt. Petrel	1	N		

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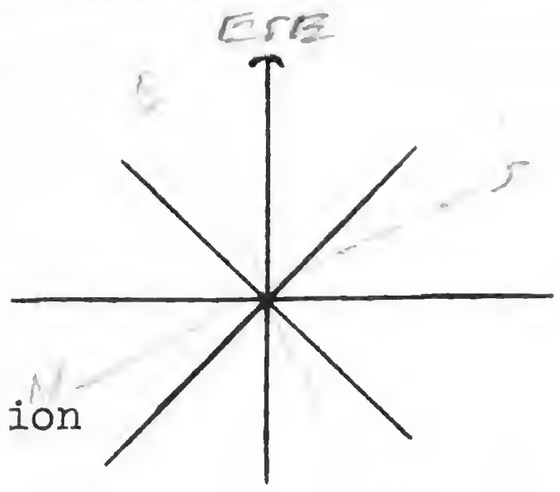


Ship Direction

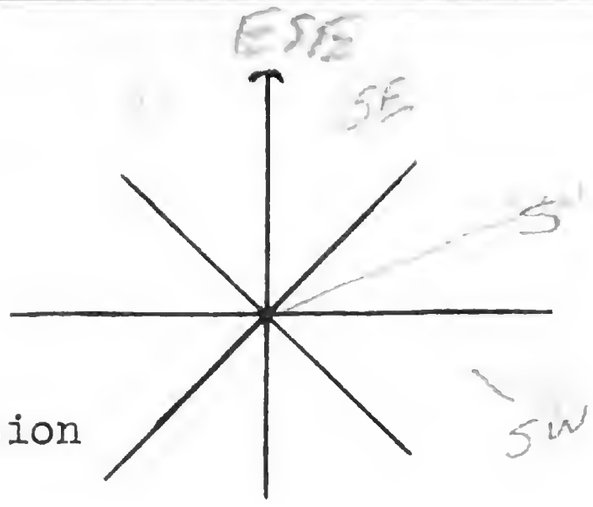
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

1000-1200 Gould
1150-1400 BAH
1400-1600 Lewis
1600-1800 Gould

Date 24 October, 1966
Pg.# 2

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1058	Wedge-tail	1	W		light phase
	1122	" "	1	SE		light phase — watched for 5 minutes and it only flapped its wings twice in the sunrise —
	1133	Shear-Pet.	1	NE		white below
	1142	Wedge-tail	1	E		light phase
	1146	Pterodroma	1	?		
	1152	Wedgetail	2	[illegible]		light
	1203	"	1	[illegible]		"
	1214	Black-W.P.	1	[illegible]		
SF	1218	Shear-Pet	19±2			
	1220	B W P	1	[illegible]		
	1230	Wedge-tail	1	[illegible]		
	1237	"	1	[illegible]		light
	1304	"	1	[illegible]		"
	1310	"	2	NE		"
	1325	"	2	NE		"
	1337	B W Pet.	2	[illegible]		"
	1353	"	1	S		
	1406	"	1	[illegible]		
	1415	"	2	[illegible]		
	1424	"	1	[illegible]		
	1428	Shear/Pet	1	SE		
	1434	B-W Pet	1	S		
	1454	"	1	SE		
	1525	BFB	1	E		Ad
	1530	Bonin Isl. Petrel	1	NE		
	1540	Shear/Pet	1	S		
	1603	Pterodroma	1	NW		
	1627	P. hypoleuca	1	SE		
	1633	Wh.-t. Tern	1	NE		= Fairy Tern
	1645	Bonin Isl. or Black-wing Petrel	1	S		



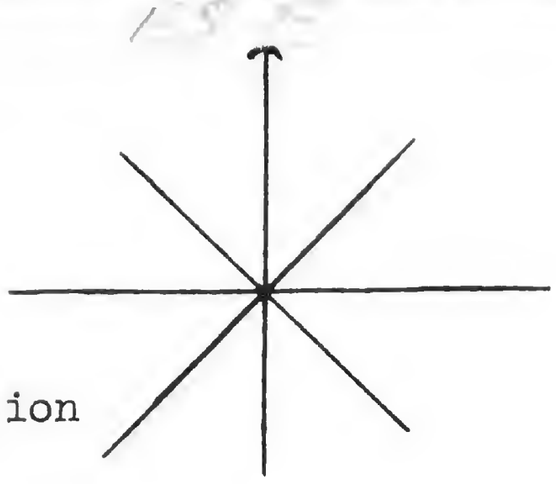
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Leach-1800 Gould

Date 24 October, 1966
Pg.# 3

TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
1648	Black-winged Petrel	1	S		
1656	Bonin Isl. / or Black-winged Petrel	1	S		
1659	Wedge-tail Shearwater	1	S		light phase
1704	Great Frigate	1	(S)		feeding motions, but not positively feeding
1712	Shear-pet	1	SE		small, light colored. Bonin Island-type
1722	Black-winged petrel	1	S		
1724	"	1	S		
1724	wedge tail	1	S		lt phase
1733	Black Storm Petrel?	1			solid black all over, tail short (definitely shorter than Leach's storm petrel), constant loose wing beats but not fluttery flight of smaller storm petrels. appeared larger than Leach's storm petrel - looked & flew exactly as I remember Black storm Petrels off of California. Bird came within gun shot of ship in relatively good light & watched for at least a minutes at this range, flew constantly low to water, but did not pattern - p/G -
1739	Bonin Isl? Petrel	1	S		
1745	small Pterodroma	1	SW		
1751	Shear-Pet	1	S		
1800	Small Pterodroma	1	S		
1801	Sm. Pterodr.	1	SE		
"	Shear/pet	1	SE		
1804	Mottled P.	1	S		
1808	Shear/pet.	1	—		
1815	"	1	NE		
1818	Wedgetail	1	—		
1820	Red-f. Booby	2	NE		adult light phase
1830					Sunset - close observations.



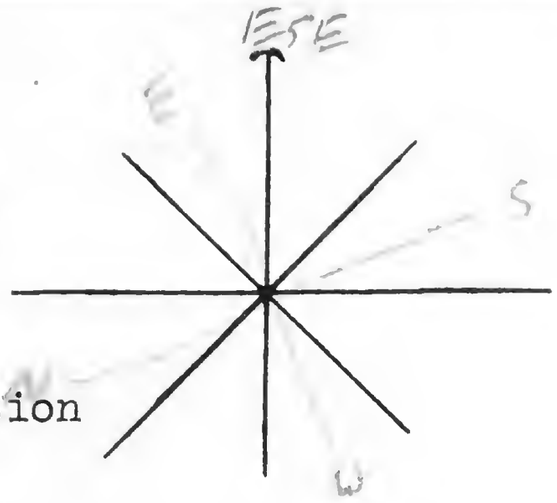
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

0700-0900 Lewis
0900-1000 Gould

Date 25 Oct 1966
Pg.# 1

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	0700					Sunrise
	0707	Bwp	2			
	0709	wedge-tail	1	1		
	0711	"		RW		light
	0712	Bonin Island	2	NW		light
		Petrel	1	N		
	0714	wedge-tail	1	NW		light
	0717	Phaethon	1	NW		
	0718	P. aethereus	1	W		
	0724	P. hypoleuca	1	NW		
	0728	wedge tail	1	NW		light
	0730	Bonin Island	1	Q		
SF	0748	Sooty Tern	17			
		Fairy Tern	2			
		wedge-tail	50±10			1 Pom's Jaeger not lighted
		Pterodroma	20±5			
	0812	Pterodroma	1	S		
	0817	"	1	N		
	0817	P. hypoleuca	1	S		
	0823	P. aethereus	1	W		
	0825	P. hypoleuca	10±2	C		searching
	0826	" "	1	WNW		heading towards brown flock
	0831	Small Sterna	1	NW		flight with no skua, high over flock
	0834	" "	1	NW		searching
	0847	Phaethon	2	NW		searching
	0907	Large Sterna	1	NW		"
	0909	small Sterna	1	W		searching
	0915	Short Tail	1	NW		white wedge-tail or large Sterna



Ship Direction

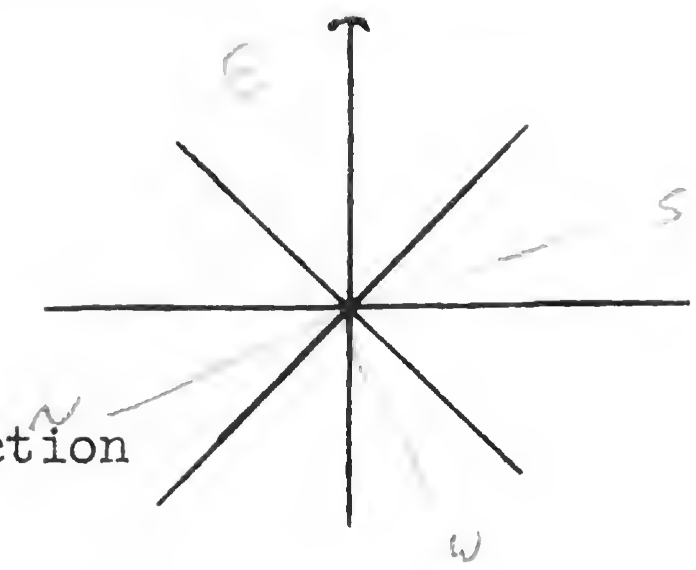
OBSERVERS:

0800-1000 = Gould

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

Date 25 October, 1966
Pg.# 2

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	0927	Black-winged Petrel	1	W		in swaling
	0934	P. externa	1	S		
	0937	Shear-Pet	1	W		
	1001	JFP	1	W		
	1011	P. externa	1	E		
	1027	Shear/Pet	1	?		
FF	1043	Shear/Pet	25±5			either Pterodroma or Audubon's
		wedge-tail	20±5			light
		P. externa	10±2			
	1048	JFP	1	E		
	1053	wedge-tail	2	?		light
	1054	Phaethon sp.	1	?		
	1134	"	1	?		
	1139	Fairy Tern	2	SE		
	1141	wedge-tail	2			together light phase
		P. lepturus	1	E		
	1145	BWP	1	E		
	1230	Fairy Tern	1			following ship.
	1245	BWP	1	S		
FF	1247	Red Tail B.	12			11 ad light ph, 1 subadult.
		Wedge-tail	7			light phase
		Com Noddy	8			
		Shear/pet	5			
		Sooty T.	2			ad
	1307	WTE SP	1			looked like Leach's
	1332	Shear/pet	2	SW		probably sooty/slenderbill
	1335	Bird	1	SW		
	1344	Fairy T.	1	?		
	1350	Pterodroma sp.	1	S		
	1425	Fairy Tern	2	SE		
	1450	Golden Plover	1	?		



Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
1400-1600 [illegible]
1600-1800 [illegible]

Date 25 October, 1965
Pg.# 3

TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
1455	Red-footed Booby	1	SE		Ad searching
1457	Fairy Tern Storm Petrels	1 2	○ ○		together and apparently feeding but could not keep in sight for long enough to be sure. Storm petrels probably either Leach's or Harcourt's but I [illegible] could not see rump.
1500	P. hypoleuca	1	SE		
1506	Wedge-tail	1	SE		light phase
1507	Fairy Tern	1	SE		traveling
1512	Wedge-tail	1	SE		light phase - traveling
1521	Black-wing Petrel	1	~		searching
[illegible]	Fairy Tern	1	N		traveling
1526	Wedge-tail	1	W		light phase
1527	" "	1	NW		" "
1529	" "	2	NE		" "
1533	Black-wing Petrel	1	~		searching
1540	Blue-gray Noddy ?	1	~		
1541	Wedgetail	1	~		light Phase
1543	Fairy Tern	1	~		searching
1548	" "	1	SE		feeding by "Air dipping"
1551	Small Pterodroma	1	~		searching
1552	Black-wing Petrel	1	~		definitely, good view in clear ?/?
FF 1600	G.N. Tern F. Tern Wedgetail RFB G. Frig. Haw. N. Tern	400 ±100 25 ±5 200 ±75 10 ±2 2 100 ±30			All figures essentially guestimates Many were sitting on H2O (>50%) " " " " " " both dark and light ph Birds leaving the flock (mostly noddies) were heading N.E. Flock feeding over predatory fish, water "boiling" with fish. Flock observed < 5 minutes
1610					about 20 wedgetails passed in front of ship heading NE in about 5 min. All light except 1 dark.
1615					Ca 15 WTS passed in front.

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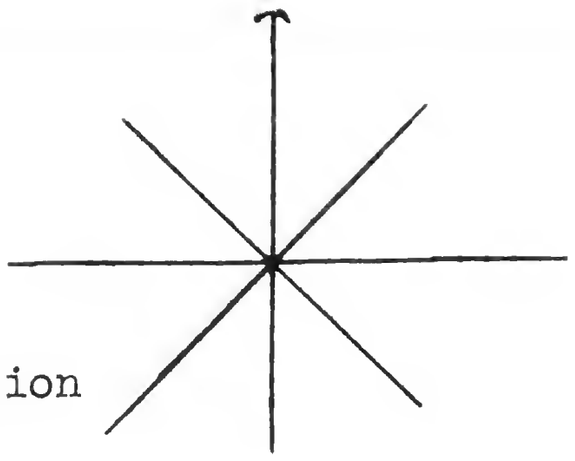


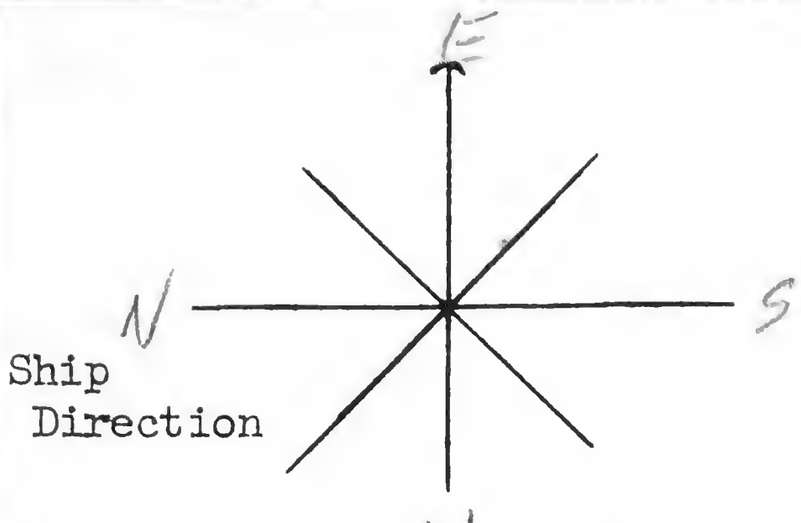
Ship Direction

OBSERVERS:

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

Date 23 Oct 66
Pg.# 4

	TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
	1625	WTS	2			
	1630	BWT	1			
	1633	WTS				
	1633	WTS	2			
	1633	Fairy T.	1			
	1634	WTS	1			
	1636	BWP	1			
	1649	WTS	1			
	1650	WTS	1			
	1650	Fairy T.	4			
	1650	Hybrid	1			
	1651	WTS				
	1652	WTS	4			
	1652	Fairy T	1			
	1653	WTS	1			
	1657	Fairy Tern	1			
	1700	WTS	1			
	1702	WTS	2			
	1704	"	2			
	1704	"	1			
FF	1710	Wedgetail	600			
		CNT	6			water swirling white under the flock
		FT	2			Int. phase (1%) LT phase (99%)
		Newell's	1			
		Sooty tern	5			
	1715	Wedgetail	too numerous to count - everywhere are groups of 1-15 almost all LT phase			
	1724	Fairy tern	1	N		
FF	1737	WTS				
	1740		3			Skua/per 75
	1742	BWP				Group 1
	1748	WTS	2			
	1746	BWP	1	NW		
	1755	BB	1	SE		ad ♀
	1810	Wedgetail	1	N		Int Phase
	1814					Count + Close Observation



Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

1
Gould - Orov - Gould

Date 26 October, 1966
Pg.# _____

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
					Begin watch 0627
0635					on sunrise
0642	wedge-tail	1	S		searching
0710	Bird	1	W		glimsed on a - stayed behind swell
S F 0800	wedge-tail	16	E		1 Pair rest light
0816	"	1	SW		
0825	Pectoral	1	W		
0842	Shear/Pet	2	W		
0845	Bon Jaspar	1			
0850	wedge. Tail	1	W		Pair 1/2 light
0853	"	1	W		
0926	"	1	NW		
0930	"	1	W		"
0930					close observations

Date 7 OCT '66 Ship USS ATF-114 TAWAKONI (010) Cruise No. 0003

Organization POBSP Recorder gould

Sunrise: Time _____ Position: Lat. _____, Long. _____

Sunset: Time 1815 W Position: Lat. 20-43.3'N, Long. 158-55.2' W

Miles travelled from 0000 hours to sunrise = —

Miles travelled from ~~sunrise~~ DEPARTURE to sunset = 64

Miles travelled from sunset to 2400 hours = 72

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.	1854 W	CELESTIAL	20° 39.5'N	155° 03.3' W
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200						
0300						
0400						
0500						
0600						
0700						
0800						
0900						
1000						
1100						
1200						
1300	21-11	158-				
1400	21 06	158 -6				
1500	21-01'N	158-M'W	095	15	110	3
1600	20-56.2'N	158-35.7'W	067	17.5	080	3
1700	20-50.5'N	158-10'W	061	15	080	3
1800	20-45'N	158-51.5'W	063	13.5	080	3
1900	20-38.5'N	158-05.3'W	053	16.2	075	3
2000	20-31.5'N	158-16.0'W	076	14.5	050	3
2100	20-24'N	158-27'W	078	11	050	3
2200	20-17.5'N	158-37.8'W	080	12	080	3
2300	20-10.5'N	158-49'W	078	11	070	2
2400	20-03.5'N	158-57.5'W	059	10	070	2

Date 8 OcT '66 Ship USS ATF 114 Tawakoni (010) Cruise No. 0003

Organization POOSP Recorder Gould

Sunrise: Time 0637 Position: Lat. 19-08.5'N, Long. 161-08'W

Sunset: Time 1839 Position: Lat. 17-47.6'N, Long. 163-31'W

Miles travelled from 0000 hours to sunrise = 86

Miles travelled from sunrise to sunset = 159.5

Miles travelled from sunset to 2400 hours = 72

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.	0612W	Celestial	19°11'N	161-02.5'W
2.	0959W	Celestial	18°47'N	161-48.2'W
3.	1236W	Celestial	18°33.8'N	162-20'W
4.	1725W	LORAN	17-52.2'N	163-12'W
5.	1905W	Celestial	17-49.9'N	163-36'W 235sp 13kts

Hourly Positions:

	Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
	0100	19-52'N	160-09.9'W	086	10	075	2
	0200	19-43'N	160-21'W	109	9	085	2
	0300	19-35'N	160-32'W	096	12	085	2
	0400	19-27'N	160-42.5'W	105	20	085	2
	0500	19-19'N	160-54'W	105	14	090	2
	0600	19-13'N	161-01'W	110	13	100	2
	0700	19-05.5'N	161-13'W	109	14.9	109	2
	0800	18-59.3'N	161-24.7'W	106	15	116	2
	0900	18-53'N	161-36.7'W	108.7	11	118	2
	1000	18°47'N	161-49.2'W	082.5	13	085	2
21	1100	18°42.1'N	161-59.5'W	081.	10	085	2
22	1200	18°37.5'N	162-12'W	081.5	12	085	2
23	1300	18°28.9'N	162°25.5'W	092	12.5	085	1
00	1400	18°21.2'N	162°37'W	092	13	085	1
01	1500	18°14.2'N	162°49'W	120	13	085	1
02	1600	18°07'N	163°00.7'W	085	8	"/"	"/"
03	1700	18°00.0'N	163°12'W	045	7	"/"	"/"
04	1800	17°52.3'N	163°23.5'W	046	8	"/"	"/"
05	1900	17°45.4'N	163°35'W	052	8	"/"	"/"
06	2000	17°38.7'N	163°47.2'W	076	8	"/"	"/"
07	2100	17°31'N	163°59'W	077	9	"/"	"/"
08	2200	17°24.5'N	164°11.5'W	077	9	"/"	"/"
09	2300	17°17.5'N	164°23'W	091	9	"/"	"/"
10	2400	17°10.2'N	164°35.2'W	084.5	13	"/"	"/"

Date 9 Oct '66 Ship USS ATF-114 TAWAKONI (010) Cruise No. 0003

Organization PoBSP Recorder PSquad

Sunrise: Time 0652 LW Position: Lat. 16°18.9'N Long. 165°56.6'W

Sunset: Time 1857 LW Position: Lat. 14°32.8'N Long. 168°14.1'W

Miles travelled from 0000 hours to sunrise = 88.5

Miles travelled from sunrise to sunset = 165

Miles travelled from sunset to 2400 hours = 63.7

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE		
1.	0632 LW	Celestial	16°23.5'N	165°59.1'W	237	13
2.	1257 LW	Celestial	15°37'N	167°06.2'W	237	13
3.	1858 LW	LORAN	14°29'N	165°14.1'W	237	13.5
4.						
5.						

Hourly Positions:

	Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
11	0100	17°03.5'N	164°17.2'W	090	12.5	095	1
12	0200	16°55'N	164°59'W	092.5	13	" / "	" / "
13	0300	16°42.8'N	165°11'W	086.5	12.7	" / "	" / "
14	0400	16°40'N	165°22'W	079	8	" / "	" / "
15	0500	16°33.3'N	165°34'W	079	9	" / "	" / "
16	0600	16°27.1'N	165°46'W	079	8	" / "	" / "
17	0700	16°[illegible]	[illegible]	079	9	" / "	" / "
18	0800	16°12.2'N	166°10.5'W	082	9	120	1
19	0900	16°04.8'N	166°22'W	100	9	095	1
20	1000	15°57.5'N	166°33.1'W	090	10	090	1
21	1100	15°50'N	166°45'W	095	9	095	1
22	1200	15°44.2'N	166°57.4'W	114	8	100	1
23	1300	15°36.4'N	167°07.3'W	122.5	12	100	1
24	1400	15°30'N	167°15'W	094	7	095	1
01	1500	15°22.1'N	167°29.5'W	108	9	095	1
02	1600	15°14.9'N	167°41.4'W	112	7.5	090	1
03	1700	15°06.6'N	167°53.4'W	111	7.5	090	1
04	1800	14°57'N	168°05.3'W	111	7.5	085	1
05	1900	14°53.3'N	168°14.1'W	095	06	080	1
06	2000	14°45.2'N	168°26'W	104	5.5	080	1
07	2100	14°37.2'N	168°36.5'W	086.5	8	080	1
08	2200	14°29.1'N	168°47'W	066	11	080	1
09	2300	14°20'N	168°57.2'W	127	11	080	1
10	2400	14°11.1'N	169°04.9'W	105	10	075	1

ATF-114
U.S.

Date 10 OCT 66 Ship TANAGER (010) Cruise No. 0003

Organization POBSP Recorder Pgould

Sunrise: Time 0700N Position: Lat. 12 43.7N Long. 170 03.8W

Sunset: Time 1900N Position: Lat. 12°18.6'N Long. 171°39.9'W

Miles travelled from 0000 hours to sunrise = 81.5

Miles travelled from sunrise to sunset = 127

Miles travelled from sunset to 2400 hours = 53

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	COURSE	SPEED
1.	0641W	CELESTIAL	13°15'N	170°01.5'W	225	11.8
2.	1324W	Celestial	12°29.5'N	170°54'W	225	11
3.	1941W	Celestial	12°21.2'N	171°45.2'W	313	10.6
4.						
5.						

Hourly Positions:

	Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
	0100	14°02'N	169°14.2'W	135	10	100	1
	0200	13°54'N	169°22.7'W	130	11	100	1
	0300	13°45.5'N	169°30.8'W	125	10	090	1
	0400	13°37.1'N	169°38.4'W	092	8	080	1
	0500	13°29.3'N	169°47.2'W	105	6.5	090	1
	0600	13°22'N	169°56'W	127	8	110	1
	0700	13°12.8'N	170°03.5'W	122	5	100	1
	0800	13°04.5'N	170°11.5'W	150	5	110	1
	0900	12°57.5'N	170°20.1'W	150	5	100	1
20	1000	12-50.0'N	170-30'W	160	8	110	1
21	1100	12-43.5'N	170-37'W	116	9	130	2
22	1200	12-39'N	170-42.5'W	118	10	135	2
23	1300	12-33'N	170-50.6'W	115	10	120	1
00	1400	12°26'N	170°57'W	115	10	110	1
01	1500	12°18.2'N	171°04.2'W	112	9	105	1
02	1600	12°10.7'N	171°11.2'W	064	5	105	1
03	1700	12°07.3'N	171°20'W	065	4	130	2
04	1800	12°12.5'N	171°29.5'W	063	4	130	2
05	1900	12°18.6'N	171°39.9'W	098	3.5	130	2
06	2000	12°23.5'N	171°48'W	265	5.5	130	2
07	2100	12°33'N	171°50.9'W	265	5.5	130	2
08	2200	12°42.5'N	171°57.2'W	253	12	110	1½
09	2300	12°50'N	171°42.7'W	255	12	110	1½
10	2400	12°57.5'N	171°34.5'W	260	13	090	2

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Rev. 9/28/66

Date 11 Oct 1966 Ship ~~USNS~~ ATF 114 (010) Cruise No. 0003

Organization POBSP Recorder P Gouveia

Sunrise: Time 0713 W Position: Lat. 13°52.3'N, Long. 170°44.1'W

Sunset: Time 1906 W Position: Lat. 15°17.1'N, Long. 169°47.3'W

Miles travelled from 0000 hours to sunrise = 73.5

Miles travelled from sunrise to sunset = 123

Miles travelled from sunset to 2400 hours = 55

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	Course	Speed
1.	0658 W	Celestial	13°50.8'N	170°46.1'W	046	10.3
2.	1306 W	Celestial	14°39.2'N	169°58.1'W	050	10.3
3.	1930 W	Celestial	15°20.5'N	169°51.1'W	314	10.3
4.						
5.						

Hourly Positions:

	Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
11	0100	13°03'N	171°32'W	142	12	090	2
12	0200	13°10.9'N	171°24.1'W	116	9	085	2
13	0300	13°18.9'N	171°16.2'W	163	8	070	2
14	0400	13°26.8'N	171°08.1'W	116	7.5	075	2
15	0500	13°34.7'N	171°01.9'W	146	11	095	1
16	0600	13°42.7'N	170°54.3'W	133	11	095	1
17	0700	13°50.5'N	170°44.1'W	093	12	093	1
18	0800	13°57.5'N	170°33.8'W	095	12	096	1
19	0900	14°07.2'N	170°31.5'W	112	6	095	2
20	1000	14°14.5'N	170°22.5'W	122	8	095	2
21	1100	14°22.4'N	170°15.6'W	122	8	095	1
22	1200	14°31.8'N	170°06.7'W	300	2	090	1
23	1300	14°38.6'N	170°00.5'W	344	7	090	1
00	1400	14°45.5'N	169°49.5'W	293	3	090	1
01	1500	14°52'N	169°41.8'W	094	6	070	1
02	1600	14°58.5'N	169°31'W	050	2	040	1
03	1700	15°04.1'N	169°31.7'W	056	3	040	1
04	1800	15°10.2'N	169°40'W	050	3	040	1
05	1900	15°16'N	169°47.8'W	216	5.5	〃/〃	〃/〃
06	2000	15°24.4'N	169°55.3'W	244	5	〃/〃	〃/〃
07	2100	15°31.9'N	170°07'W	239	6	〃/〃	〃/〃
08	2200	15°23°N	170°14.9'W	140	7	〃/〃	〃/〃
09	2300	15°16°N	170°22.7'W	137	6	〃/〃	〃/〃
10	2400	15°10'N	170°30'W	080	7.5	〃/〃	〃/〃

Date 12 OcT 1966 Ship USS ATF 114 TAWAKONI (010) Cruise No. 000 5

Organization POBSP Recorder Pgaved

Sunrise: Time 0715W Position: Lat. 14°12.8'N, Long. 171°30.2'W

Sunset: Time 1913 W Position: Lat. 13°54.6'N, Long. 173°02.9'W

Miles travelled from 0000 hours to sunrise = 82

Miles travelled from sunrise to sunset = 135.5

Miles travelled from sunset to 2400 hours = 214

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	COURSE	SPEED
1.	0655 W	Celestial	14°15'N	171°26.9'W	226	11
2.	1947 W	Celestial	14°00.3'N	172°36.5'W	313	10.8
3.						
4.						
5.						

Hourly Positions:

	Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
11	0100	15°02.1'N	170°29.1'W	074	11	"/"	"/"
12	0200	14°52.9'N	170°47.8'W	074	11	"/"	"/"
13	0300	14°45'N	170°55.6'W	074	11	"/"	"/"
14	0400	14°37.8'N	171°03.8'W	115	7	"/"	"/"
15	0500	14°29.9'N	171°12'W	096	7.5	"/"	"/"
16	0600	14°23'N	171°20'W	076	7.5	"/"	"/"
17	0700	14°14'N	171°25.2'W	092	10	"/"	"/"
18	0800	14°06.8'N	171°36.4'W	105	12	110	1
19	0900	13°57.5'N	171°45.1'W	125	12	110	1
20	1000	13°48.1'N	171°54.1'W	265	10	110	1
21	1100	13°41.9'N	172°02.2'W	265	12	110	1
22	1200	13°33.0'N	172°11'W	119	11	140	1
23	1300	13°25.2'N	172°19.3'W	139	9	130	1
24	1400	13°17'N	172°27.8'W	165	15	180	2
01	1500	13°24.3'N	172°36.41'W	110	3	150	1
02	1600	13°31.2'N	[illegible]	110	3	150	1
03	1700	13°39.2'N	172°53.2'W	138.5	6.8	170	1
04	1800	13°47'N	173°01.2'W	125.5	6	160	1
05	1900	13°52.2'N	173°05.1'W	133	7	165	1
06	2000	14°02'N	172°54.5'W	135	7	165	1
07	2100	14°11.2'N	172°47'W	146	7	145	1
08	2200	14°18.2'N	172°40'W	136	7	150	1
09	2300	14°20.5'N	172°32.8'W	308	11	345	1
10	2400	14°33'N	172°25.5'W	135	8	110	1

Date 13 Oct 1966 Ship Townsend (010) Cruise No. 0003

Organization POBSP Recorder P Gowed

Sunrise: Time 0716W Position: Lat. 15°26'N, Long. 171°33.9'W

Sunset: Time 1908W Position: Lat. 16°32.5'N, Long. 171°22.3'W

Miles travelled from 0000 hours to sunrise = 74

Miles travelled from sunrise to sunset = 134

Miles travelled from sunset to 2400 hours = 49.5

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	Course	Speed
1.	0652W	Celestial	15°22.2'N	171°32.2'W	045°T	9.9
2.	1930W	Celestial	16°28.1'N	171°25.0'W	220°T	10.3
3.						
4.						
5.						

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100	14°40.3'N	172°17.9'W	040	8	110	1
0200	14°46.2'N	172°11.2'W	050	6	100	1
0300	14°52.3'N	172°04.2'W	060	7	110	1
0400	15°02.5'N	171°56.7'W	060	7	070	2
0500	15°10.5'N	171°49.1'W	060	7	080	2
0600	15°12.9'N	171°42.1'W	060	6	080	1
0700	15°25.5'N	171°34.2'W	060	6	080	1
0800	15°31'N	171°28.5'W	060	5	080	1
0900	15°32'N	171°20.9'W	340	13	025	2
1000	15°43.8'N	171°13'W	340	6	"	"
1100	15°50.8'N	171°05.5'W	190	5.5	"	"
1200	15°57'N	170°57.7'W	220	5	"	"
1300	16°04.9'N	170°49.8'W	340	5	"	"
1400	16°06.7'N	170°36.8'W	190	6	"	"
1500	16°15.9'N	170°28.6'W	250	6	"	"
1600	16°26.5'N	170°19'W	275	4	"	"
1700	16°33.5'N	170°09.7'W	270	4	"	"
1800	16°40'N	171°05.2'W	260	6	"	"
1900	16°33'N	171°13.6'W	090	5	"	"
2000	16°25.5'N	171°20'W	101	5.5	"	"
2100	16°15.3'N	171°32.7'W	065	4.6	"	"
2200	16°11.4'N	171°36.6'W	051	2.5	"	"
2300	16°05'N	171°52.3'W	051	2.3	"	"
2400	15°57.2'N	172°00.0'W	115	5.5	"	"

Date 14 OCT '66 Ship USS TOWERS (DDG 9) Cruise No. _____

Organization _____ Recorder _____

Sunrise: Time 0724 W Position: Lat. 15°08.5'N Long. 172°57'W

Sunset: Time 1917 W Position: Lat. 15°04'N Long. 173°53.3'W

Miles travelled from 0000 hours to sunrise = 75

Miles travelled from sunrise to sunset = 126

Miles travelled from sunset to 2400 hours = 49

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	Course	Speed
1.	0704 W	Celestial	15°09.6'N	172°54.9'W	226	11
2.	1322 W	Celestial	14°43'N	174°02.7'W	316	10
3.	1945 W	Celestial	15°06.8'N	173°51'W	867	10
4.						
5.						

Hourly Positions:

	Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
11	0100	15°58.3'N	172°[illegible]W	065	5	11/--	--/--
12	0200	15°04'N	172°15.1'W	068	5	--/--	--/--
13	0300	15°37'N	172°17.9'W	072	11.5	--/--	--/--
14	0400	15°20.2'N	172°20.8'W	086	9	--/--	--/--
15	0500	15°18.2'N	172°23.8'W	090	8	--/--	--/--
16	0600	15°16.5'N	172°26.5'W	090	6	--/--	--/--
17	0700	15°10.5'N	172°55.9'W	114	12	130	1
18	0800	15°02'N	173°03'W	109	9	125	1
19	0900	14°53'N	173°11.4'W	120	10	125	1
20	1000	14°44.5'N	173°21'W	126	9	140	1
21	1100	14°36'N	173°30.1'W	121	9	135	1
22	1200	14°27'N	173°41.5'W	102	5.5	135	1
23	1300	14°26.8'N	173°46.2'W	102	6	135	1
00	1400	14°32.9'N	173°53.2'W				
01	1500	14°40'N	174°00.3'W				
02	1600	14°48'N	174°07.9'W				
03	1700	14°55.4'N	174°15'W				
04	1800	14°53'N	174°07.1'W				
05	1900	15°03'N	173°58'W				
06	2000	15°06.8'N	173°45.9'W				
07	2100	15°10.5'N	173°35.9'W				
08	2200	15°14.7'N	173°25'W				
09	2300	15°15.9'N	173°15.1'W				
10	2400	15°23.6'N	173°03.2'W				

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Date 15 Oct 66 Ship USS Thomaston (DD 760) Cruise No. _____

Organization _____ Recorder _____

Sunrise: Time 0718 W Position: Lat. 15°35.5'N, Long. 171°56.9'W

Sunset: Time 1900 W Position: Lat. 16° 39.9'N Long. 170° 21.9'W

Miles travelled from 0000 hours to sunrise = 75

Miles travelled from sunrise to sunset = 107

Miles travelled from sunset to 2400 hours = 64

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	Course	Speed
1.	0656 W	Celestial	15°52'N	172°01.4'W	067	10.2
2.	1389 W	"	16° 11.5'N	171° 09.5'W	067	9.4
3.	1933 W	"	16° 44.7'N	170° 22'W	000	12.2
4.						
5.						

Hourly Positions:

Time W	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100	15° 27'N	172° 55.3'W	110°	6.5	120	1
0200	15° 31.1'N	172° 48.2'W	100°	7	140	1
0300	15° 36'N	172° 38.3'W	100°	8.5	080	1
0400	15° 40'N	172° 27.7'W	093°	10.3	080	1
0500	15° 44.4'N	172° 16.1'W	093°	10.3	080	1
0600	15° 49'N	172° 08.2'W	124°	10	085	1
0700	15° 52'N	172° 00'W	125°	7	085	1
0800	15° 55.9'N	171° 51.8'W	116°	9	090	1
0900	15° 59'N	171° 42.3'W	125°	7	090	1
1000	16° 02'N	171° 33.8'W	114°	9.5	090	1
1100	16° 04.9'N	171° 25.2'W	114°	9.5	090	1
1200	16° 07'N.	171° 18.5'W	115°	7	090	1
1300	16° 12.1'N	171° 10.2'W	115°	8	090	1
1400	16° 16.9'N	171° 01.3'W	175°	5	" / "	" / "
1500	16° 21'N	170° 53'W	117°	4.5	" / "	" / "
1600	16° 25.7'N	170° 44'W	115°	6	" / "	" / "
1700	16° 31.1'N	170° 35.2'W	190°	4	" / "	" / "
1800	16° 35.8'N	170° 27'W	144°	6.5	090°	1
1900	16° 39.9'N	170° 21.9'W	185°	9.5	090	1
2000	16° 50'N	170° 24'W	090°	5	090	1
2100	17° 02.2'N	170° 28'W	128°	2.5	090	1
2200	17° 14.2'N	170° 33'W	113°	5	100	1
2300	17° 26.5'N	170° 37.3'W	144°	7.5	100	1
2400	17° 39'N	170° 42'W	140°	8	100	1

ATF 114

Date 16 OCT 1966 Ship USS TAWAKONI (010) Cruise No. 0003

Organization COMSP Recorder P Gouveia

Sunrise: Time 0719 W Position: Lat. 19°02.7'N Long. 171°20.5'W

Sunset: Time 1904 W Position: Lat. 21°16.9'N Long. 172°13.8'W

Miles travelled from 0000 hours to sunrise = 89

Miles travelled from sunrise to sunset = 144.5

Miles travelled from sunset to 2400 hours = 62

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	COURSE	SPEED
1.	0707 W	Celestial	18°59.8'N	171°19.1' W	339°(T)	12.8 KTS.
2.	1311 W	"	20°11.6'N	171°48.4' W	339°(T)	12.2 KTS.
3.	1934 W	"	21°23'N	172°16' W	339°(T)	12.5 KTS.
4.						
5.						

Hourly Positions:

Z / W Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
1100 0100	17°50.8'N	170°51.2' W	140°	5	" / "	" / "
0200	18°02.6'N	170°56.4' W	140°	6	" / "	" / "
0300	18°08.7'N	171°01' W	145°	6	" / "	" / "
0400	18°24.7'N	171°05.1' W	109°	6	" / "	" / "
0500	18°36.3'N	171°09.8' W	107°	5	" / "	" / "
0600	18°47.9'N	171°14.3' W	134°	6	" / "	" / "
0700	18°59.8'N	171°19.1' W	121°	8.5	" / "	" / "
0800	19°10.5'N	171°23.2' W	121°	8.5	" / "	" / "
0900	19°22.2'N	171°25' W	111°	7	" / "	" / "
1000	19°34.5'N	171°33.3'W	110°	6.5	" / "	" / "
1100	19°46.5'N	171°37.8'W	110°	6	" / "	" / "
1200	19°59.6'N.	171°43.8'W	120°	7	" / "	" / "
1300	20°11.6'N	171°48.4'W	180°	7	" / "	" / "
1400	20°20'N	171°48.8'W	180°	7	" / "	" / "
1500	20°30.8'N	171°54'W	180°	7	" / "	" / "
1600	20°43.1'N	171°58' W	108°	4.5	" / "	" / "
1700	20°54.7'N	172°03.2' W	110°	5	" / "	" / "
1800	21°05.4'N	172°07.3' W	136°	9	" / "	" / "
1900	21°16.9'N	172°13.8'W	142°	6.5	140	1
2000	21°28'N	172°18' W	142°	6.5	140	1
2100	21°40'N	172°22.3 W	134°	6	" / "	" / "
2200	21°51'N	172°27.2'W	143°	7	" / "	" / "
2300	22°03.2'N	172°33' W	138°	7	025	2
2400	22°15.3'N	172°37.2' W	138°	9	020	2

Date 17 OCT 1966 Ship USS ATF 114 TAWAKONI (010) Cruise No. 003

Organization POMSP Recorder P Gunsel

Sunrise: Time 0731 W Position: Lat. 23°48'N, Long. 173°15'W

Sunset: Time 1909 W Position: Lat. 24°59.4'N Long. 173°32'W

Miles travelled from 0000 hours to sunrise = 90 mi.

Miles travelled from sunrise to sunset = 86 mi

Miles travelled from sunset to 2400 hours = 29

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	COURSE	SPEED
1.	0705 W	Celestrial	23°33.2'N	173°12.7'W	339°(T)	12.3 KTS
2.	1939 W	Celestrial	25°01.6'N	173°32.2'W	325°(T)	5.5 kts
3.						
4.						
5.						

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100	22° 27.2'N	172° 42.3' W	134°	8	020	2
0200	22° 39' N	172° 47.7' W	134°	9	020	2
0300	22° 51.7' N	172° 53.1' W	134°	9	020	2
0400	23° 02.7' N	172° 58.1' W	150°	7.5	145	2
0500	23° 13.5' N	173° 04' W	150°	7	145	2
0600	23° 20.4' N	173° 08.9' W	150°	7	145	2
0700	23° 32' N	173° 12' W	150°	7	145	2
0800	23° 44.1' N	173° 17.1' W	140°	7	145	2
0900	23° 54.1' N	173° 21.5' W	340°	6	145	2
1000	24° 05' N	173° 26.1' W	330	7	150	2
1100	24° 20' N	173° 31' W	330	7	150	2
1200	24° 31.5' N	173° 36.4' W	154	6	150	1
1300	24° 36' N	173° 35.9' W	158	4	158	1
1400	24° 40.2' N	173° 35' W				
1500	24° 43.5' N	173° 34.5' W				
1600	24° 47.3' N	173° 33.5' W				
1700	24° 51.1' N	173° 33.2' W				
1800	24° 55.5' N	173° 32.4' W				
1900	24° 59.4' N	173° 32' W				
2000	25° 02.7' N	173° 32.5' W				
2100	25° 05.2' N	173° 37' W				
2200	25° 13' N	173° 41.5' W				
2300	25° 18' N	173° 46.3' W				
2400	25° 23.7' N	173° 53.2' W				

Date 18 Oct 1964 Ship Tawakoni (ATF 114) (010) Cruise No. 0003

Organization PMRC Recorder Pgerard

Sunrise: Time 0737W Position: Lat. 25°58.9'N, Long. 174-11'W

Sunset: Time _____ Position: Lat. _____, Long. _____

Miles travelled from 0000 hours to sunrise = 64.3 T

Miles travelled from sunrise to ~~sunset~~ anchor = ~~79.1~~ 9.1

Miles travelled from sunset to 2400 hours = _____

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.	0709	Star	26 02	174° 21' W (not to be used)
2.				
3.				
4.				
5.				

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100	25° 23'N	174° 00.3'W	180	7	11/11	11/11
0200	25° 27'N	174° 07.4'W	180	12	120	1
0300	25° 30.9'N	174° 14.8'W	180	9	120	1
0400	25° 36.5	174° 15.3'W	120	7	120	1
0500	25° 44.1'N	174° 16.2'W	185	9	180	1
0600	25° 50.9'N	174° 17.1'W	170	7	165	1
0700	25° 58.0'N	174° 19.5'W	165	7	120	1
0800	26° 04.7'N	174° 9.2'W	160	0	150	1-2
0900	Anchored off					
1000						
1100	Lisianski Is.					
1200						
1300						
1400						
1500						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						

Date 20 Oct 66 Ship USS ATF 114 TAWAKONI (010) Cruise No. 0003

Organization OOSP Recorder Dgould

Sunrise: Time _____ Position: Lat. _____, Long. _____

Sunset: Time _____ Position: Lat. _____, Long. _____

Miles travelled from 0000 hours to sunrise = —

Miles travelled from ~~sunrise~~ to ~~sunset~~ = 0857 - 1916 = 135

Miles travelled from sunset to 2400 hours = _____

TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE
1.			
2.			
3.			
4.			
5.			

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200	ANCHORED IFO					
0300						
0400	LISTANSKI ISLAND	(26°03.2'N			174°01.5'W	
0500						
0600						
0700						
0800						
0900	26°03'N	174°02.8'W	297	13	145	1
1000	25°52'N	174°03'W	201	13.5	150	1
1100	25°57.2'N	173°49.2'W	187	12.5	130	1
1200	25°49.3'N	173°35'W	150	13	130	1
1300	25°30.1'N	173°21'W	160	5	140	1
1400	25°49.5'N	173°07'W	150	7	140	2
1500	25°49'N	172°52.9'W	140	7	140	2
1600	25°45.5'N	172°38.8'W	153	14.3	120	2
1700	25°41.5'N	172°24.5'W	160	8	130	2
1800	25°47.3'N	172°10.5'W	157	12	125	2
1900	25°46.8'N	171°56.7'W	160	12	125	2
2000						
2100	ANCHORED IFO					
2200						
2300	LISTANSKI IS.	(25°46.4'N			171°45.7'W)	
2400						

Date 23 Oct '66 Ship USS TRUCKEE (AOT 114) (010) Cruise No 003

Organization [illegible] Recorder P Gomez

Sunrise: Time _____ Position: Lat. _____, Long. _____

Sunset: Time 1916 W Position: Lat. 25-13.2'N, Long. 171-11.2'W

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from ~~sunrise~~ departure to sunset = 51

Miles travelled from sunset to 2400 hours = 58

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	
1.	1924	Celestial	25-12'N	171-11.5'W	121 - 8.5
2.					
3.					
4.					
5.					

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100						
0200	Anchored					
0300	off					
0400	Lahaina					
0500						
0600						
0700						
0800						
0900						
1000						
1100						
1200						
1300	25-47.2'N	171°48.2'W				
1400	25-40.7'N	171° 48.5'W				
1500	25-35.5'N	171° 41.2'W				
1600	25-29.8'N	171° 34'W				
1700	25-24.8'N	171° 26.5'W				
1800	25-19'N	171° 18.8'W				
1900	25-13.8'N	171° 11.0'W				
2000	25-08.9'N	171° 05'W				
2100	25-01.9'N	170-53.5'W				
2200	24-57'N	170-43.1'W				
2300	24-46.5'N	170-31.5'W				
2400	24-37.5'N	170-20.1'W				

Date 24 OCT '66 Ship USS TAWAKONI (ATF 114) Cruise No. _____

Organization _____ Recorder _____

23

Sunrise: Time 0716 Position: Lat. 24-05.7 Long. 168-44'W

Sunset: Time 1833 Position: Lat. 23-27.2'N Long. 166-17.6'W

Miles travelled from 0000 hours to sunrise = 94

Miles travelled from sunrise to sunset = 142

Miles travelled from sunset to 2400 hours = 62

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	COURSE	SPEED
1.	0049	CELESTIAL	24-07.2'N	169-50'W	107	12.8
2.	1256	CELESTIAL	23-50.2'N	167-28.5'W	107	11.61
3.	1737	CELESTIAL	23-32.5'N	166-35.5	107	11.6
4.						
5.						

Hourly Positions:

	Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
11	0100	24-31.7'N	170-09'W	060	15	065	3
12	0200	24-24.5'N	169-52.3'W	060	15	065	3
13	0300	24-21.5'N	169-43.8'W	080	15	065	3
14	0400	24-18'N	169-25'W	115	25	065	3
15	0500	24-14.5'N	169-15.5'W	110	25	065	3
16	0600	24-10.5'N	169-01'W	113	25	065	3
17	0700	24-06.0'N	168-48'W	105	20	065	3
18	0800	24-03.5'N	168-34.5'W	090	15	070	3
19	0900	24-01.2'N	168-22.1'W	085	20	070	3
20	1000	23-58.5'N	168-08.5'W	085	20	070	3
21	1100	23-56'N	167-55'W	080	18	070	3
22	1200	23-53'N	167-47.5'W	070	25	065	3
23	1300	23-49.5'N	167-31.1'W	070	22	065	3
00	1400	23-46'N	167-17.2'W	100	22	060	3
01	1500	23-42.1'N	167-04.5'W	090	24	065	3
02	1600	23-37.8'N	166-50.8'W	080	20	065	3
03	1700	23-34.0'N	166-40.3'W	110	23	065	3
04	1800	23-30.4'N	166-29.1'W	090	22	065	3
05	1900	23-27.2'N	166-17.6'W	095	22	065	3
06	2000	23-23'N	166-04.7'W	080	22	065	3
07	2100	23-19'N	165-51.8'W	080	17	065	3
08	2200	23-15.5'N	165-39.1'W	090	17	065	3
09	2300	23-11.4'N	165-26.5'W	090	18	065	3
10	2400	23-07.5'N	165-14'W	080	20	060	3

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Date 25 Oct '66 Ship USS HAWKINS (DLG) Cruise No. _____

Organization _____ Recorder _____

Sunrise: Time 0700W Position: Lat. 22-39.5'N Long. 163-44'W

Sunset: Time 1812W Position: Lat. 21° 51.2'N Long. 161° 23.8'W

Miles travelled from 0000 hours to sunrise = 86

Miles travelled from sunrise to sunset = 140

Miles travelled from sunset to 2400 hours = 67.5

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	COURSE	Speed
1.	0631	Celestial	22-41.8'N	163-57.4'W	107	12.5
2.	1300	LORAN	22-15	162-31.5	109	12.3
3.	1816	Celestial	21-49.5	161-20.5	109	12.3
4.						
5.						

Hourly Positions:

	Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
11	0100	23-03.2'N	165-01.7'W	075	18	060	3
12	0200	23-00.0'N	164-49'W	075	18	060	3
13	0300	22-56.9'N	164-36.2'W	085	17	065	3
14	0400	22-51.6'N	164-23.8'W	090	20	065	3
15	0500	22-47.8'N	164-10.8'W	090	24	070	3
16	0600	22-43.7'N	163-56.1'W	090	20	070	3
17	0700	22-39.8'N	163-46'W	090	20	075	3
18	0800	22-35.1'N	163-32.1'W	090	20	085	3
19	0900	22-31.3'N	163-20.5'W	069	12.5	085	3
20	1000	22-27.4'N	163-08.9'W	038	13	085	3
21	1100	22-23'N	162-55.5'W	038	13	085	3
22	1200	22-19'N	162-41'W	040	15	090	4
	1300	22-15'N	162-31.5'W	090	14	090	5
	1400	22-10.9'N	162-18.2'W	040	10	050	4
	1500	22-05.8'N	162-06.3'W	040	10	050	4
	1600	22-01.3'N	161-53.8'W	045	12	050	2
	1700	21-57.2'N	161-41.4'W	055	12	055	2
	1800	21-52.3'N	161-28.1'W	055	16	060	2
	1900	21-48'N	161-16.5'W	045	15	060	2
	2000	21-44.7'N	161-05.5'W	050	15	060	2
	2100	21-40.5'N	160-51.8'W	070	15	060	2
	2200	21-38'N	160-39.2'W	080	20	060	2
	2300	21-32.9'N	160-26.9'W	080	20	070	2
	2400	21-30.0'N	160-13.8'W	042	14	050	2

Date 26 Oct. 1966 Ship USS TAWAKONI (ATF-114) Cruise No. _____

Organization _____ Recorder _____

Sunrise: Time 0639 Position: Lat. 21-14.2'N Long. 158-55.6'W

Sunset: Time _____ Position: Lat. _____, Long. _____

Miles travelled from 0000 hours to sunrise = 74

Miles travelled from sunrise to ~~sunset~~ 0915 = 31.5 (55 miles from sunrise to Pearl Harbor)

Miles travelled from sunset to 2400 hours = _____

	TIME OF FIX	TYPE OF FIX	LATITUDE	LONGITUDE	COURSE	Speed
1.	0611	Celestial	21-14'N	158-34.2'W	090°(T)	12.3 kts
2.						
3.						
4.						
5.						

Hourly Positions:

Time	Latitude	Longitude	Wind Dir.	Wind Sp.	Wave Dir.	Wave Hgt.
0100	21-27.5'N	160-02'W	042	14	050	2
0200	21-24.7'N	159-49.2'W	042	14	050	3
0300	21-22'N	159-37.2'W	063	14	060	3
0400	21-19'N	159-25'W	070	12	060	3
0500	21-16.5'N	159-13.0'W	090	12	080	3
0600	21-14.2'N	159-03'W	090	10	080	3
0700	21-14.2'N	158-46.8'W	090	10	080	3
0800	21-14'N	158-34.2'W	090	10	080	3
0900	21-14.5'N	158-21.4'W	080	10	"	"
1000						
1100						
1200						
1300						
1400						
1500						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						

PRELIMINARY REPORT

NORTHERN GRID SURVEY NO. 32

and

NON-GRID PELAGIC OBSERVATIONS

October 7 to 26, 1966

prepared by

Patrick J. Gould

PELAGIC SURVEY REPORT

This report is a preliminary analysis of the pelagic field work conducted by the Pacific Ocean Biological Survey Program from 07-26 October, 1966. Any discussion of the data contained herein is purely speculative in nature and should not be relied upon until a more critical analysis, including comparison with existing and future data, can be made.

Logistic support was provided by the U.S.S. Tawakoni (ATF 114) whose officers and crew cheerfully cooperated with the Smithsonian personnel whenever necessary. They were also responsible for the collection of all weather and position data. P.O.B.S.P. personnel included Patrick Gould (Biologist in Charge), Ken Balcomb, Brian Harrington, and Jim Lewis.

Weather conditions were excellent with relatively low winds and calm seas except for the return trip along the Leeward Islands when winds reached 20-25 knots and the seas became very rough.

A total of 1,655 miles and 146.8 hours of diurnal observations plus an additional 777 miles and 72.6 hours of nocturnal observations were completed. As in other surveys, the data was gathered over linear transects with the ship moving at from 10 to 13 knots most of the time. The general area covered was from Oahu to the Northern Grid (3 days), the Northern Grid Proper (6 days), the Northern Grid to Lisianski (2 days), and from Laysan to Oahu (2 days). This was the first time that pelagic observations had been made along the Leeward Islands in October.

During this period a total of 25 species (12.6 per day) plus two recognizable subspecies was recorded. Although this is somewhat higher than in previous years the latter have been thought to be too low and it is believed that this current data are quite normal for this area at this time of year.

The total number of birds recorded was 4,279 (2.59 birds per linear mile). Although this is almost identical to previous findings it is not comparable because of the inclusion of Leeward Island observations in this month's data. The number of birds in the vicinity of the Leeward Islands is almost always much greater than in more distant pelagic areas. This greatly increases the final density figures. It is felt, then, that the total density of birds within the area for the current survey was much lower than expected from previous data. The most conspicuous reason for this low density was the relatively small number of Sooty/Slender-billed Shearwaters moving through the area. The total density for these species was only about 30% that of previous averages.

The following report is divided into sections which roughly correspond to three basically different areas. 1) includes the area from Oahu to the Northern Grid and from the Northern Grid to the Leeward Islands. 2) includes only the Northern Grid proper. 3) includes the length of the Leeward Islands from Laysan to Oahu.

SECTION 1 - NON GRID

This section covers the pelagic area between the Hawaiian and Leeward Islands and the Northern Grid. It excludes the area within one day of the Leeward Islands but includes a partial day off the island of Oahu. No nocturnal observations were conducted and the collection of specimens was not attempted although one bird that flew on board was retained as a study skin.

A total of four and one-half days of pelagic observations was conducted in this area covering a total of 620 miles and 53.0 hours. During this period a total of 1,426 birds (2.3 per linear mile) was recorded (See TABLE I).

TABLE I

DAILY AREA COVERAGE

Date	No. Miles	No. Hours	No. Birds	No. Species
07	64	5.6	392	10+
08	160	12.0	188	13+
09	165	12.1	600	13+
16*	145	11.7	154	14+
17*	86	11.6	92	10+
Total	620	53.0	1426	23+

* These days were both over farther to the west than the previous three.

A total of 23 species plus two additional recognizable subspecies and one extra questionable species were identified (See TABLE II). The following paragraphs contain discussions of only those species for which additional data was obtained but not included in TABLE II.

TABLE II

SPECIES COMPOSITION AND DENSITY OUTSIDE THE NORTHERN GRID

Species	Number	No. Lin. Mi.	No. Coll.	Status over prior* October averages
Wedge-tailed Shearwater	257	0.415	0	same
Sooty/Slender-billed Shearwater	66	0.106	0	same
Christmas Island Shearwater	1	0.002	0	greater
Pale-footed Shearwater	1	0.002	0	same
Newell's Shearwater	4	0.006	0	same
Dark-rumped Petrel**	3	0.005	0	?
Pterodroma externa (Total)	154	0.248	0	greater
Juan Fernandez Petrel	128****	0.206	0	?
White-necked Petrel	4****	0.006	0	?
Mottled Petrel	14	0.023	0	greater
Pterodroma hypoleuca	70	0.113	0	fewer
Bonin Island Petrel**	2****	0.003	0	?
Black-winged Petrel	65****	0.105	0	?
Bulwer's Petrel	4	0.006	0	same
Leach's Storm Petrel***	9	0.015	0	fewer
Red-tailed Tropicbird	9	0.015	0	same
White-tailed Tropicbird	4	0.006	0	fewer
Blue-faced Booby	2	0.003	0	fewer
Red-footed Booby	5	0.008	0	same
Great Frigatebird	4	0.006	0	fewer
Golden Plover	12	0.019	0	same
Ruddy Turnstone	2	0.003 .003	0	same
Spotted Sandpiper	1	0.002	1	first record
Sooty Tern	209	0.337	0	greater
Common Noddy Tern	7	0.011	0	fewer
Fairy Tern	2	0.003	0	greater
Pomarine Jaeger	6	0.010	0	greater
Unidentified birds	580	0.935	0	

* See memo "Birds Between Oahu Island and Johnston Atoll (more than 100 miles from land), October 1965."
** Identification unreliable.
*** Includes all white-rumped Storm Petrels.
**** Included in above total.

Note: Black-footed Albatross, Kermadec Petrel, and Japanese White-eye have all been recorded in previous years in this area.

Wedge-tailed Shearwater: 49 percent of all birds observed were within 65 miles of Oahu. The rest were divided rather evenly throughout the remaining area.

Ninety-four percent of the 174 individuals identified to color-phase were light-phase birds, while only ca. 03% were intermediate-phase and ca. 03% were dark-phase. It is noteworthy, however, that five of the six dark-phase birds were observed in the same area (ca. 15°44'N- 166°54'W) which was the southernmost area involved in this section. The higher density of dark-phase birds encountered further south (see next section) indicates that these birds may belong to the southern island population. If this is true then this is far north of their previously observed distribution at this time of the year.

Sooty/Slender-billed Shearwaters: Of the 59 birds for which the underwing could be seen, 33 had white while 26 had dark.

Of the 65 birds recorded, 40% were headed south, 40% were headed southeast, and 20% were headed southwest. This is a similar situation to that found in the early (September) migrants for previous years and may indicate that the migration is late this year.

Christmas Island Shearwater: Although expected, this is the first record for this species in this area during October.

Pterodroma externa: This is an exceptionally high density for this area but former data were, at best, relatively unreliable and information from other areas indicates that the present surveys' figures are probably accurate.

Mottled Petrel: This was an exceptionally heavy migration being more than twice that of former records for this area.

Pterodroma hypoleuca: Although the density level this month was below that of previous years, the relatively unreliable former records make it impossible to compare data.

White-rumped Storm Petrels: Over half of the birds observed had very broad white rumps indicating possible Harcourt's or Wilson's Storm Petrels.

Blue-faced Booby: One orange-streamered bird was observed at 18°07'N by 163°01'W on 08 October. It was a sub-adult and the streamer appeared to be very new.

Spotted Sandpiper: One bird flew on board on 09 October at 14°59'N by 168°05'W and was collected. This is the first pelagic record of this species by this project.

Fairy Tern: Although expected, this species has not previously been recorded in this area during October.

SECTION 2 - NORTHERN GRID

This section covers only the Northern Grid proper. Complete diurnal and nocturnal coverage was completed and specimens were collected where possible. A total of six full days and nights of observation covered 1,530 miles and 144.0 hours (See TABLE III).

TABLE III

DAILY AREA COVERAGE

Date	No. Miles		No. Hours		No. Birds		No. Species	
	Day	Night	Day	Night	Day	Night	Day	Night
09	0	64	0	5.0	0	68	0	3
10	127	135	12.0	12.0	151	22	12	6
11	123	129	11.9	12.1	104	11	11	4
12	136	126	12.0	12.0	166	15	14	4
13	134	124	11.9	12.1	119	9	12	5
14	126	124	11.9	12.1	374	7	14	2
15	107	75	11.7	7.3	148	1	16	1
Total	753	777	71.4	72.6	1062	133	22+	8+

A total of 22 species plus one additional recognizable subspecies was recorded (See TABLE IV). The following paragraphs contain discussions of only those species for which additional data were obtained but not included in TABLE IV.

Wedge-tailed Shearwater: 63% of those birds identified to color phase were light-phase birds while the rest were dark-phase birds. It is interesting that all but one of the nine dark-phase birds recorded were south of 14 degrees North while all of the light-phase birds were north of 14 degrees North.

Sooty/Slender-billed Shearwater: Of the 295 birds for which direction of flight was recorded, 45% were headed south, 34% were headed southwest, and 21% were headed southeast. This is a similar pattern to the early migrants (September) found in previous years and may indicate a late

TABLE IV

SPECIES COMPOSITION AND DENSITY WITHIN THE NORTHERN GRID

Species	Number	No./Lin. Mi.	No. Coll.	Status over prior* October averages
Wedge-tailed Shearwater	26	0.035	0	-0.07 B/L.M.
Sooty/Slender-billed Shearwater	302	0.401	0	-0.86 "
Christmas Island Shearwater	1	0.001	0	same "
Pale-footed Shearwater	8	0.011	0	+0.01 "
Pink-footed Shearwater	1	0.001	0	+ "
Dark-rumped Petrel	3****	0.004	0	-
Pterodroma externa	110*	0.146		+0.08 "
Juan Fernandez Petrel	75***	0.100	4	N.R. "
White-necked Petrel	5***	0.007	0	N.R. "
Kermadec Petrel	1	0.001	0	same "
Phoenix Island/Tahitian Petrel	3	0.004	0	+ "
Mottled Petrel	45	0.060	0	+0.05 "
Cook's Petrel	2****	0.002 ?	0	-
Pterodroma hypoleuca	48	0.064		+0.04 "
Black-winged Petrel	43***	0.057	1	N.R. "
Bulwer's Petrel	10	0.013	0	+0.01 "
Leach's Storm Petrel**	10	0.013	0	+0.01 "
Red-tailed Tropicbird	24	0.032	4	+0.01 "
White-tailed Tropicbird	3	0.004	0	+ "
Red-footed Booby	4	0.005	0	+ "
Great Frigatebird	18	0.024	0	+0.01 "
Golden Plover	38	0.050	5	+0.02 "
Sooty Tern	173	0.230	0	-0.08 "
Gray-backed Tern	1	0.001	0	+ "
Common Noddy Tern	3	0.004	1	same "
Fairy Tern	4	0.005	0	same "
Pomarine Jaeger	1	0.001	0	+ "
Long-tail Jaeger	1	0.001	0	
Unidentified birds	222	0.295	0	-

* See April 1966 Report
** Includes all white-rumped Storm Petrels
*** Included in above total
**** Identification uncertain

Note: Bonin Island Petrels, Blue-faced Boobies, and Brown Boobies have been reported from the gird in previous years but never commonly.

migration for 1966. If this is the case then next month's (November) total should be very high. If November totals are not high then another explanation, possibly that of sampling error which can be great when dealing with migrating birds, must be investigated.

Pale-footed Shearwater: Although only eight birds were recorded this is still a remarkably high number, but may be explained by improved field capabilities on the part of the investigators.

Pink-footed Shearwater: One bird with a large pale-colored bill was observed at close range on 12 October. This is the first record for the grid area.

Pterodroma externa: Although former records for this group are relatively unreliable, the 50% increase over the expected density may be meaningful.

Pterodroma hypoleuca: The high density this month as compared with previous years is probably mostly due to past problems in identification.

Phoenix Island/Tahitian Petrel: The three birds recorded this month constitute the first reliable record of this species pair within the grid area.

White-tailed Tropicbird: Although expected, these are the first October records for the grid area.

Red-footed Booby: In former years the first birds of the season did not appear until November. Four birds is thus a large number to be found at this time of year.

Gray-backed Tern: This is the first record for October within the grid area.

The overall density for birds within the grid is much less than was to be expected from previous data (See TABLE V). This is largely the result of the failure of Sooty/Slender-billed Shearwaters to pass through the area in large numbers. Increased numbers of Pterodroma, especially Pterodroma externa, tended to offset the lack of shearwaters to a small extent. Sooty Terns were also below the expected density level, but not drastically as in the above. All other species groups showed higher densities than were expected.

TABLE V

DIURNAL ABUNDANCE OF SPECIES GROUPS WITHIN THE NORTHERN GRID

Species Group	Number	Birds/Sq. Mi.	Estimated Pop.	Expected Pop.*
Shearwater-Petrel	711	0.47	23,600	44,500
Tern	231	0.10	5,000	7,200
Tropicbird	30	0.02	1,000	500
Frigatebird	22	0.01	350	50
Storm Petrel	12	0.02	750	25
Booby	4	0.002	100	100
Shorebirds	38	0.05	2,500	?
Jaegers	6	0.004	250	?
Unidentified	8	0.005	250	300**
Total birds	1062	0.68	33,850	54,400

* See April 1966 Report
** Includes Shorebird and Jaeger figures

A cursory examination of the data indicates that bird density was highest in the West Quadrant of the grid (almost double that of any other quadrant), and lowest in the East Quadrant.

Relatively few nocturnal birds were seen. The total of 133 (see TABLE VI) includes a flock of 12 Sooty Terns and 50 Shearwater-Petrels about three minutes after sunset on 09 October. This presents a heavy bias to the data since, had the ship been moving somewhat faster, we

would have recorded these as diurnal birds. The only night when birds were relatively numerous and constantly about the ship was on 10 October in very rainy and overcast weather. At this time the birds were attracted to the ship's lights. Excluding the large flock of birds just after sunset, the greatest numbers were observed during the fifth and sixth hour after sunset. This is consistent with previous findings. (See Table VII.)

TABLE VI

NOCTURNAL ABUNDANCE OF BIRDS WITHIN THE NORTHERN GRID

Species	No. Birds	Birds/Night
Sooty/Slender-billed Shearwater	3	0.50
Wedge-tailed Shearwater	1	0.17
Juan Fernandez Petrel	6	1.00
Mottled Petrel	1	0.17
Black-winged Petrel	3	0.50
Red-tailed Tropicbird	3	0.50
Golden Plover	5	0.83
Sooty Tern	20	3.33
Shearwater-Petrel (unidentified)	66	11.00
Tern (unidentified)	2	0.33
Shorebirds (unidentified	1	0.17
Birds (unidentified)	21	3.50
Total	133	22.17

TABLE VII

HOURLY NOCTURNAL FLUCTUATION IN BIRD NUMBERS

Date	Hours after sunset											
	1	2	3	4	5	6	7	8	9	10	11	12
09-10	62	0	0	0	6	9	5	1	0	2	3	0
10-11	0	0	0	1	1	1	1	1	0	0	0	1
11-12	1	0	1	3	2	1	1	0	2	1	1	0
12-13	0	1	5	2	1	0	1	0	0	1	1	3
13-14	2	1	0	0	0	0	0	0	0	1	0	0
14-15	0	1	3	1	1	0	0	0	0	0	0	1
Total	65	3	9	7	11	11	8	2	2	5	5	5

SECTION III - LEEWARD ISLANDS

This section covers the pelagic area between Laysan Island and Oahu Island. No nocturnal observations were conducted and the collection of specimens was not attempted. A total of two days of pelagic observations was conducted covering a total of 282 miles and 22.4 hours. (See TABLE VIII.) During this period a total of 1,791 birds (6.35 per linear mile) was recorded.

TABLE VIII

DAILY AREA COVERAGE

Date	No. Miles	No. Hours	No. Birds	No. Species
24	142	11.2	100	11+
25	140	11.2	1691	14+
Total	282	22.4	1791	17+

A total of 17 species plus one recognizable subspecies was recorded (See TABLE IX). The Wedge-tailed Shearwater counts are muc too low since in one area these birds were far too numerous to count. Just off shore of Lisianski Island Bonin Island Petrels were very abundant around sunrise. All appeared to be moving slowly to the southwest and by one-half hour after sunrise relatively few birds were left in the area.

TABLE IX

SPECIES COMPOSITION AND DENSITY ALONG THE LEEWARD ISLANDS

Species	Number of birds	No. Per Linear Mile
Black-footed Albatross	1	0.004
Wedge-tailed Shearwater	981+	3.48
Newell's Shearwater	1	0.004
Pterodroma externa	37	0.13
Juan Fernandez Petrel	2***	0.01
Mottled Petrel	4	0.01
Pterodroma hypoleuca	58	0.21
Bonin Island Petrel	3***	0.01
Black-winged Petrel	29***	0.10
Leach's Storm Petrel*	3	0.01
Black Storm Petrel**	1	0.004
Blue-faced Booby	1	0.004
Brown Booby	1	0.004
Red-footed Booby	25	0.09
Great Frigatebird	3	0.01
Golden Plover	1	0.004
Sooty Tern	24	0.09
Common Noddy Tern	414	1.47
Hawaiian Noddy Tern	101	0.36
Blue-Gray Noddy Tern**	1	0.004
Fairy Tern	46	0.16
Unidentified birds	88	0.31

* Includes all white-rumped Storm Petrels
** Identification uncertain
*** Included in above total

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS TAWAKONI (AT-114) DATE (GMT) 23 OCTOBER 19 66

AT/PASSAGE FROM LAGUNA ISLAND TO

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	340	15	10	BKN	30.00	81	70	5	1800	CU	82	010	2	2	320	7	
01	350	27	10	BKN	29.11	84	71	5	1800	CU	82	020	3	2	320	7	5
02	070	7	10	BKN	29.99	85	72	5	1800	CU	82	355	3	2	340	7	5
03	040	10	10	BKN	29.98	86	71	5	1800	CU	82	020	3	2	340	7	5
04	055	13	10	BKN	30.00	80	71	8	1800	CU	82	020	3	2	340	7	5
05	060	15	10	BKN	30.01	77.5	75	8	1800	CU	82	020	3	2	340	7	5
06	065	13	10	BKN	[illegible]	77	[illegible]	8	1800	CU	82	020	3	2	340	7	5
07	025	15	8	BKN	30.06	77	69	8	1800	CU	82	026	2	2	348	7	6
08	040	18	8	BKN	30.03	76	69	9	1800	CU	82	030	2	2	345	7	6
09	040	14	8	OVC	30.07	76	74	10	1800	CU	82	030	2	2	345	7	6
10	010	11	8	BKN	30.06	76	68	7	1800	CU	82	015	3	2	345	6	6
11	040	13	8	BKN	30.04	76	69	8	1800	CU	82	020	3	2	350	6	6
12	035	14	8	BKN	30.04	76	68	8	1800	CU	82	030	3	2	350	6	6
13	035	12	8	BKN	30.03	76	68	6	1800	CU	82	025	3	2	010	6	6
14	040	10	10	BKN	30.02	76	68	6	1800	CU	82	030	3	2	015	6	5
15	070	10	10	BKN	30.02	76	69	6	1800	CU	82	030	3	2	015	6	5
16	070	11	8	BKN	30.02	76	65	6	1800	CU	82	030	3	2	015	6	5
17	070	5	8	BKN	30.04	75	65	6	1800	CU	82	040	3	2	310	6	5
18	070	5	10	BKN	[illegible]	[illegible]	[illegible]	1	[illegible]	CU	82	030	3	1	340	7	6
19	040	5	10	BKN	30.08	76	67	1	[illegible]	CU	82	CU	[illegible]	1	[illegible]	7	[illegible]
20	[illegible]	7	10	[illegible]	30.04	74	68	[illegible]	[illegible]	CU	[illegible]	[illegible]	3	1	340	5	4
21	[illegible]	11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	6
22	050	5	[illegible]	[illegible]	30.10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3	1	[illegible]	[illegible]	[illegible]
23	050	8	8	SCT	30.08	83	74	6	1800	CU	82	040	3	1	340	6	6

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP: Octant (0-3) (5-8)	POSITION OF SHIP: Latitude (Degrees and tenths)	POSITION OF SHIP: Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	WIND: Direction (True) (00-36)	WIND: Speed (True) (Knots)	Visibility (90-99)	WEATHER: Present (00-99)	WEATHER: Post (0-9)	PRESSURE: Barometer Corrected (Mb)	AIR TEMP. (°C)	CLOUDS: Amount of Low Cloud	CLOUDS: Type of C_L (0-9)	CLOUDS: Height of Low Cloud	CLOUDS: Type of C_M (0-9)	CLOUDS: Type of C_H (0-9)	Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY: Characteristic (0-8)	3-HOUR PRESSURE TENDENCY: Amount of Change (Mb and tenths)	SIGNIFICANT CLOUD: Indicator	SIGNIFICANT CLOUD: Amount (Eighths)	SIGNIFICANT CLOUD: Type	SIGNIFICANT CLOUD: Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_o L_a L_o$	$L_o L_o L_o$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	1	1	258	718	00	4	31	15	29	01	1	159	27	4	2	7	0	0	0	0	6	01	8	7	8	18
SHIP	1	1	258	718	06	6	07	13	98	03	2	173	[illegible]	6	3	4	0	0	0	0	2	14	8	6	8	18
SHIP	1	1	258	718	12	8	04	14	98	02	2	173	24	8	3	4	0	0	0	0	7	07	8	8	8	18
SHIP	1	1	[illegible]	[illegible]	18	7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	21	7	4	4	[illegible]	[illegible]	[illegible]	[illegible]	7	14	8	7	6	18

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES: Indicator	SEA WAVES: Direction (Coded)	SEA WAVES: Period (Coded)	SEA WAVES: Height (Coded)	SWELL WAVES: Indicator	SWELL WAVES: Direction (Coded)	SWELL WAVES: Period (Coded)	SWELL WAVES: Height (Coded)	ICE ACCRETION: Indicator	ICE ACCRETION: Source	ICE ACCRETION: Thickness	ICE ACCRETION: Rate	SEA ICE: Indicator	SEA ICE: Kind	SEA ICE: Effect	SEA ICE: Bearing	SEA ICE: Distance	SEA ICE: Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e
0	51	17	1	01	2	1	1	32	3	2	2				ICE					
0	56	13	1	02	2	1	1	34	3	3	2				ICE					
0	56	18	1	02	2	1	1	35	3	3	2				ICE					
0	57	16	1	[illegible]	[illegible]	1	1	[illegible]	4	4	2				ICE					

DO NOT TRANSMIT: Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A_1	A_2	A_3
Celsius	Celsius	Celsius
25.0	20.6	27.8
24.4	20.0	27.8
24.4	19.7	[illegible]

REMARKS _____ EXAMINED _____ USN, NAVIGATOR

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS IRAWAKONI (ATF-114) DATE (GMT) 24 OCTOBER 19 66

AT/PASSAGE FROM LAYZAN ISLAND TO PEARL HARBOR, HAWAII

TABLE I

TIME (GMT)	WINDS ☐ IF ESTIMATED Direction (True)	WINDS ☐ IF ESTIMATED Force (Knots)	VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths) Dry Bulb	TEMPERATURE (Degrees and tenths) Wet Bulb	CLOUDS Amount (Tenths)	CLOUDS Height	CLOUDS Type	SEA WATER TEMP. (Degrees and tenths)	SEA WAVES Direction (True)	SEA WAVES Period (Seconds)	SEA WAVES Height (Feet)	SWELL WAVES Direction (True)	SWELL WAVES Period (Seconds)	SWELL WAVES Height (Feet)
00	028	11	10	OVC	30.07	83.5	70	10	1800	Cu	82	71	3	1	320	5	5
01	064	13	10	BKN	30.02	80	71	6	1800	Cu	82	060	3	1	120	4	5
02		14		SCT													
03		11		SCT													
04		12		SCT													
05						0											
06	000	13		SCT			7					058			100	4	6
07	042	20	5	SCT	30.04	78	69	4	1800	CU	82	065	3	2	085	4	6
08	050	22	8	SCT	30.04	78	70	4	1800	CU	82	065	3	2	090	4	6
09	063	29	8	SCT	30.03	78	71	5	1800	CU	82	070	3	2	085	4	6
10	060	25	8	SCT	30.03	79	68	5	1800	Cu	82	065	3	3	075	5	5
11	060	25	8	BKN	30.03	78	70	8	1800	Cu	82	065	3	3	075	5	5
12	065	25	8	OVC	30.02	78	71	10	1800	Cu	82	065	3	3	075	5	5
13	090	25	8	BKN	30.00	79	71	6	1800	Cu	82	065	3	3	075	5	5
14	115	25	8	BKN	29.98	78	73.5	6	1800	Cu	82	065	3	3	075	5	5
15	110	25	8	BKN	29.99	78	75	6	1800	Cu	83	065	3	3	075	5	5
16	110	25	8	BKN	29.98	78	76	6	1800	Cu	83	065	3	3	075	5	5
17	100	20	8	BKN	29.99	78	75	6	1800	Cu	83	065	3	3	075	5	5
18	090	15	8	BKN			71			CU	83	070	3	3	075	5	6
19	045	20	8	SCT	30.02	79	71	4	1800	CU	83	070	3	3	075	5	6
20	095	20	8	BKN	30.01	81	71	5	1800	CU	83	070	3	3	075	5	6
21	090	18	8	BKN	30.04	80	72	5	1800	CU	82	070	3	3	075	5	6
22	078	20	5	BKN	30.03	86.5	72	7	1800	CU	85	065	3	3	075	5	6
23	070	22	8	SCT	30.03	80.5	72	5	1800	CU	83	065	3	3	080	5	6

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP Octant (0-3) (5-8)	POSITION OF SHIP Latitude (Degrees and tenths)	POSITION OF SHIP Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	WIND Direction (True) (00-36)	WIND Speed (True) (Knots)	Visibility (90-99)	WEATHER Present (00-99)	WEATHER Past (0-9)	PRESSURE Barometer Corrected (Mb)	AIR TEMP. (°C)	CLOUDS Amount of Low Cloud	CLOUDS Type of C_L (0-9)	CLOUDS Height of Low Cloud	CLOUDS Type of C_M (0-9)	CLOUDS Type of C_H (0-9)	Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY Characteristic (0-8)	3-HOUR PRESSURE TENDENCY Amount of Change (Mb and tenths)	SIGNIFICANT CLOUD Indicator	SIGNIFICANT CLOUD Amount (Eights)	SIGNIFICANT CLOUD Type	SIGNIFICANT CLOUD Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_a L_a L_a$	$L_o L_o L_o$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	2	1	257	718	00	8	03	11	99	03	1	183	28	8	2	4	0	0	4	4	6	10	8	8	8	18
SHIP	2	1	245		06	—	10	13	98	02	1	179	25	2	1	4	0	0	3	4	2	10	8	2	8	18
SHIP	2	1	245	699	12	8	07	15	04	03	2	166	26	8	2	4	0	0	2	4	6	05	8	8	4	18
SHIP	2	1	242	696	18	5	01	15	99		2	179	4	5	2	4	0	0	2	4	0	25	8	8	8	13

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES Indicator	SEA WAVES Direction (Coded)	SEA WAVES Period (Coded)	SEA WAVES Height (Coded)	SWELL WAVES Indicator	SWELL WAVES Direction (Coded)	SWELL WAVES Period (Coded)	SWELL WAVES Height (Coded)	ICE ACCRETION Indicator	ICE ACCRETION Source	ICE ACCRETION Thickness	ICE ACCRETION Rate	SEA ICE Indicator	SEA ICE Kind	SEA ICE Effect	SEA ICE Bearing	SEA ICE Distance	SEA ICE Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e
0	01	19	1	07	2	1	1	33	2	3	2				ICE					
0	56	18	1	08	2	1	1	16	2	3	2				ICE					
0	52	20	1	07	2	2	1	04	2	3	2				ICE					
0	54	20	1	07	2	2	1	33	2	4	2				ICE					

DO NOT TRANSMIT Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A_1	A_2	A_3
Celsius	Celsius	Celsius
25.8	24.6	27.8

REMARKS _____ EXAMINED _____ USN, NAVIGATOR

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS TAWASENI ATF 114 DATE (GMT) THURS-DAY 25 OCT 19 66

AT/PASSAGE FROM LAYSAN ISLAND TO MIDWAY ISLAND

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00)																	
01	075	24	10	SCT	29.96	83	72	5	1500	CU	83	065	3	3	075	4	5
02	080	20	10	BKN	29.96	85	75	6	1500	CU	83	065	3	3	075	4	5
03	090	23		BKN	29.95	82	73	6	1500	CU	83	065	3	3	075	4	5
04	090	22	10	BKN	29.96	82	—	6	1500	CU	83	065	3	3	075	4	5
05	095	22	10	BKN	29.98	84	74	6	1800	CU	83	065	3	3	075	4	5
06)	080	22	10	BKN	29.99	77	74	6	1800	CU	83	065	3	3	075	4	5
07	080	17	8	BKN	29.99	77	74	6	1800	CU	82	065	3	3	075	4	5
08	090	17	8	BKN	29.99	77	74	6	1800	CU	82	065	3	4	075	4	5
09	090	15	7	BKN	29.98	77	74	6	1800	CU	82	065	3	4	075	4	5
10	080	20	5	BKN	29.99	77	73	7	1800	CU	82	060	3	3	070	4	5
11	075	18	5	BKN	29.97	78	74	6	1800	CU	82	060	3	3	070	4	4
12)	075	18	8	SCT	29.96	78	74	5	1800	CU	82	060	3	3	070	4	4
13	085	19	8	SCT	29.95	78	72	4	1800	CU	82	065	3	3	075	4	4
14	090	20	8	SCT	29.95	79	73	5	1800	CU	82	065	3	3	080	4	4
15	090	21	8	SCT	29.95	79	72	3	1800	CU	82	070	3	3	080	4	4
16	090	20	8	SCT	29.95	75	73	3	1800	CU	82	070	3	3	080	4	4
17	090	20	8	SCT	29.95	79	73	4	1800	CU	82	075	3	3	085	4	4
18)	090	20	8	SCT	29.97	79	73	4	1800	CU	82	085	3	3	090	4	4
19	069	25	8	SCT	29.99	80	73	6	1800	CU	82	085	3	3	090	4	4
20	038	13	8	SCT	29.99	81	74	6	1800	CU	82	085	3	3	090	4	4
21	038	13	8	SCT	30.01	81	74	6	1800	CU	82	085	3	3	090	4	4
22	090	15	7	SCT	29.99	81	74	4	1800	CU	82	090	3	4	090	4	4
23	090	17	6	SCT	29.98	81	74	5	1800	CU	82	090	3	5	090	4	5

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP			TIME (GMT)	Total Cloud Amt. (Coded)	WIND		Visibility (90-99)	WEATHER		PRESSURE	AIR TEMP. (°C)	CLOUDS					Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY		SIGNIFICANT CLOUD			
		Octant (0-3) (5-8)	Latitude (Degrees and tenths)	Longitude (Degrees and tenths)			Direction (True) (00-36)	Speed (True) (Knots)		Present (00-99)	Past (0-9)	Barometer Corrected (Mb)		Amount of Low Cloud	Type of C_L (0-9)	Height of Low Cloud	Type of C_M (0-9)	Type of C_H (0-9)			Characteristic (0-8)	Amount of Change (Mb and tenths)	Indicator	Amount (Eights)	Type	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_a L_o L_o$	$L_o L_o L_o$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP					00																		8			
SHIP	3	1	234	660	06	5	05	22	95	02	2	156	25	5	1	1	1	1	2	5	2	14	8	5	8	18
SHIP	3	1	229	648	12	5	18	15	98	02	1	146	25	5	2	4	1	1	2	5	7	10	8	5	8	15
SHIP	3	1	226	635	18	3	09	20	98	02	0	149	26	2	3	4	0	0	2	5	3	07	8	3	8	18

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES				SWELL WAVES				ICE ACCRETION				SEA ICE						DO NOT TRANSMIT		
			Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicator	Kind	Effect	Bearing	Distance	Orientation	Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	A_1	A_2	A_3
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e	Celsius	Celsius	Celsius
0			1				1				2				ICE								
0	56	23	1	07	2	2	1	08	2	3	2				ICE						25.3	23.3	22.7
0	58	22	1	06	2	2	1	07	2	3	2				ICE						25.6	23.3	22.7
0	52	22	1	09	2	2	1	09	2	3	2				ICE								

REMARKS _____ EXAMINED _____ USN, NAVIGATOR

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS TAWAKONI ATF 114 DATE (GMT) 21 OCT 4 19 6C

AT/PASSAGE FROM _____ TO _____

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	140	10	8	ST	29.96	---	72	1	1700	CU	82	150	4	4	090	5	7
01	0[illegible]	1[illegible]	8	ST	29.95	72	72	1	180[illegible]	CU	82	090	_	4	090	5	7
02	145	12	8	SCT	29.94	72	71	5	1800	CU	82	030	3	2	080	5	5
03	155	12	8	SCT	29.94	71	70	5	1800	CU	82	040	3	2	080	5	5
04	155	11	8	SCT	29.94	71	70	5	1800	CU	82	161	3	2	075	5	5
05	145	15	8	SCT	29.95	70	75	5	1800	CU	82	110	3	2	075	5	5
06	155	15	8	SCT	29.95	80	75	5	1800	CU	82	060	3	2	080	5	5
07	070	15	8	SCT	30.00	80	75	3	1800	CU	82	060	3	2	070	5	5
08	090	20	8	CLR	30.00	80	71	2	/	/	82	060	3	2	070	5	5
09	080	20	8	SCT	30.02	79	72	2	1800	CU	82	070	3	2	070	5	5
10	142	14	8	SCT	30.00	79	72	2	1800	CU	83	050	3	2	065	5	5
11	072	14	8	SCT	30.00	79	72	6	1800	CU	83	050	3	2	065	5	5
12	042	14	8	SCT	29.99	79	72	2	1800	CU	83	050	3	3	065	5	5
13	062	14	8	SCT	29.97	79	71.5	2	1800	CU	83	060	3	3	075	5	5
14	070	13	8	SCT	29.96	79	71.5	2	1800	CU	83	060	3	3	075	5	5
15	090	12	8	SCT	29.97	78	70	2	1800	CU	83	080	3	3	075	5	5
16	071	15	8	SCT	29.94	78	71	2	1800	CU	82	090	3	3	110	5	5
17	090	10	8	SCT	30.00	79	71	2	1800	CU	83	080	3	2	100	5	5
18	090	10	8	SCT	30.02	79	71	2	1800	CU/CU	83	080	3	1	160	5	2
19	080	10	8	SCT	30.02	79	72	3	1800	CU	82	110	3	2	100	5	1
20	075	11	8	SCT	30.03	81	72	5	1800	CU	82	110	3	2	110	5	1
21																	
22																	
23																	

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP			TIME (GMT)	Total Cloud Amt. (Coded)	WIND		Visibility (90-99)	WEATHER		PRESSURE	AIR TEMP. (°C)	CLOUDS					Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY		SIGNIFICANT CLOUD			
		Octont (0-3) (5-8)	Latitude (Degrees and tenths)	Longitude (Degrees and tenths)			Direction (True) (00-36)	Speed (True) (Knots)		Present (00-99)	Post (0-9)	Barometer Corrected (Mb)		Amount of Low Cloud	Type of C_L (0-9)	Height of Low Cloud	Type of C_M (0-9)	Type of C_H (0-9)			Characteristic (0-8)	Amount of Change (Mb and tenths)	Indicator	Amount (Eighths)	Type	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_o L_o L_o$	$L_o L_o L_o$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	4	1	227	623	00	4	04	10	98	01	1	146	28	4	1	4	0	0	2	5	7	17	8	4	8	18
SHIP	4	1	217	610	06	5	05	15	98	12	0	142	26	5	2	4	C	C	2	5	2	02	8	5	8	18
SHIP	4	1	217	598	12	2	04	14	98	02	1	156	26	2	2	4	0	0	2	5	6	10	8	2	8	18
SHIP					18																		8			

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES				SWELL WAVES				ICE ACCRETION				SEA ICE						DO NOT TRANSMIT		
			Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicator	Kind	Effect	Bearing	Distance	Orientation	Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48			
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e	A_1	A_2	A_3
0	10	22	1	05	2	2	1	09	2	4	2				ICE						Celsius	Celsius	Celsius
0	52	22	1	06	2	2	1	08	2	3	2				ICE						22.8	23.4	23.5
0	51	22	1	05	2	2	1	07	2	3	2				ICE						21.7	22.9	23.5
0			1				1				2				ICE								

REMARKS _____ EXAMINED _____ USN, NAVIGATOR

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS Tawakoni AFT 114 DATE (GMT) 8 October 19 66

AT/PASSAGE FROM Pearl Harbor, Hawaii TO 10° 28 N, 164° 48 W

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
01	094	15	10	Bkn	29.87	81	71	8	1200	Cu	84	110	4	3	130	2	1
02	097	17.5	10	BKN	29.85	80	72	9	1500	Cu	83	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
03	061	15	10	Sct	29.86	80	72	4	1800	Cu	84	080	4	3	090	2	1
04	063	13.5	10	SCT	29.88	80	72	4	1800	Cu	84	080	4	3	080	2	1
05	083	16.2	10	BKN	29.89	79	72	6	1800	Cu	84	095	4	3	100	2	1
06	076	14.5	10	BKN	29.90	79	72	6	1800	Cu	84	080	4	3	090	2	1
07	078	14.6	10	BKN	29.91	79	72	6	1800	Cu	84	090	4	3	100	2	1
08	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	84	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
09	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	090	4	2	[illegible]	[illegible]	[illegible]
10	091	16	8	BKN	29.92	79	73	6	1800	Cu	84	090	4	2	100	3	2
11	096	16	8	BKN	29.91	79	73	7	1800	Cu/St	84	075	4	2	095	3	2
12	091	15	8	BKN	29.90	79	73	8	1800	Cu	84	085	4	2	105	3	2
13	096	12	8	BKN	29.88	80	74	7	1800	Cu	84	085	4	2	110	3	2
14	105	20	5	OVC	29.87	78	74	10	1745	St	84	075	4	2	100	3	2
15	101	14	8	OVC	29.88	79	74	10	1800	St/Cu	84	090	4	2	100	3	2
16	110	13	8	Bkn	29.89	79	74	9	1800	St/Cu	84	100	3	2	105	3	2
17	109	14.9	8	BKN	29.89	79	74	9	1800	St/Cu	84	119	3	2	125	3	2
18	106	15	8	BKN	29.89	80	745	9	1800	St/Cu	84	116	3	2	120	3	2
19	1087	111	8	BKN	29.93	85	75	9	1800	St/Cu	84	118	3	2	125	3	2
20	0825	13	10	BKN	29.94	85	76	8	1800	Cu	84	085	3	2	090	3	2
21	0812	10	10	BKN	29.92	85	770	6	1800	Cu	85	085	3	2	090	3	2
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP: Octant (0-3) (5-8)	POSITION OF SHIP: Latitude (Degrees and tenths)	POSITION OF SHIP: Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	WIND: Direction (True) (00-36)	WIND: Speed (True) (Knots)	Visibility (90-99)	WEATHER: Present (00-99)	WEATHER: Past (0-9)	PRESSURE: Barometer Corrected (Mb)	AIR TEMP. (°C)	CLOUDS: Amount of Low Cloud	CLOUDS: Type of C_L (0-9)	CLOUDS: Height of Low Cloud	CLOUDS: Type of C_M (0-9)	CLOUDS: Type of C_H (0-9)	Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY: Characteristic (0-8)	3-HOUR PRESSURE TENDENCY: Amount of Change (Mb and tenths)	SIGNIFICANT CLOUD: Indicator	SIGNIFICANT CLOUD: Amount (Eighths)	SIGNIFICANT CLOUD: Type	SIGNIFICANT CLOUD: Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_a L_a L_a$	$L_a L_a L_a$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	7	1	195	593	00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	6	1	9	0	1	3	5	2	07	8	7	2	61
SHIP	~~7~~	~~1~~	~~196~~	~~604~~	~~06~~	~~6~~	~~11~~	~~09~~	~~98~~	~~02~~	~~2~~	~~125~~	~~26~~	6	1	4	0	0	5	5	2	07	8	6	8	18
SHIP	7	1	196	604	12	6	11	09	98	02	2	125	26	6	1	4	0	0	5	5	2	07	8	6	8	18
SHIP	1	1	191	614	18	7	11	15	98	02	2	152	26	6	1	4	1	0	5	5	1	08	8	6	7	61

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES: Indicator	SEA WAVES: Direction (Coded)	SEA WAVES: Period (Coded)	SEA WAVES: Height (Coded)	SWELL WAVES: Indicator	SWELL WAVES: Direction (Coded)	SWELL WAVES: Period (Coded)	SWELL WAVES: Height (Coded)	ICE ACCRETION: Indicator	ICE ACCRETION: Source	ICE ACCRETION: Thickness	ICE ACCRETION: Rate	SEA ICE: Indicator	SEA ICE: Kind	SEA ICE: Effect	SEA ICE: Bearing	SEA ICE: Distance	SEA ICE: Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e
0	[illegible]	19	1	[illegible]	22	[illegible]	1	09	2	0	2				ICE					
0	[illegible]	~~21~~	~~1~~	~~09~~	~~2~~	~~2~~	~~1~~	~~11~~	~~2~~	~~2~~	2				ICE					
0	[illegible]	21	1	09	2	2	1	11	2	2	2				ICE					
0	52	23	1	12	2	1	1	12	2	1	2				ICE					

DO NOT TRANSMIT: Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A_1	A_2	A_3
Celsius	Celsius	Celsius
26.1	22.2	28.9
~~26.1~~	~~22.8~~	~~28.9~~
26.1	22.8	28.9

REMARKS _____ EXAMINED _____ USN, NAVIGATOR

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS TAWAKONI ATF 114 DATE (GMT) 9 OCTOBER 19 66

AT/PASSAGE FROM PEARL HARBOR, HAWAII TO 14°38N 168°48W

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	092	13	10	BKN	29.87	85	77	6	2400	CU	85	085	2	1	080	3	3
01	090	13	10	BKN	29.84	85	76	6	2400	CU	85	085	2	1	080	5	6
02	085	08	10	BKN	29.83	85	76	6	2500	CU	84	085	2	1	080	5	4
03	045	07	10	BKN	29.83	85	76	6	2500	CU	84	085	2	1	085	5	4
04	046	08	10	BKN	29.83	85	76	7	2500	CU(C)	84	085	2	1	080	5	4
05	052	08	10	BKN	29.84	84	75	6	2500	CU	84	085	2	1	080	5	4
06	026	08	8	SCT	29.88	81	74	4	1800	CU	84	085	2	1	080	4	4
07	027	09	8	SCT	29.90	81	75	4	1900	CU	84	085	2	1	080	4	4
08	027	09	8	SCT	29.91	81	75	4	1900	CU	84	085	2	1	080	4	3
09	051	08	8	SCT	29.91	81	75	4	1900	CU	84	085	2	1	085	4	3
10	089.5	13	8	SCT	29.90	81	75	4	1800	CU	84	085	2	1	085	4	3
11	090	12.5	8	SCT	29.89	81	75	4	1800	CU	84	085	2	1	085	4	3
12	092.5	13	8	SCT	29.89	81	76	3	1800	CU	84	085	2	1	085	4	2
13	086.5	12.7	8	SCT	29.87	81	76	3	1800	CU	84	085	2	1	090	4	2
14	090	12	8	SCT	29.85	81.5	75.5	3	1800	CU	83	085	2	1	090	4	4
15	090	9.0	8	SCT	29.86	82.5	75.5	3	1800	CU	83	085	2	1	090	4	4
16	094	9	8	SCT	29.87	81	76	3	1800	CU	83	085	2	1	090	4	4
17	091	9.0	8	SCT	29.89	81	76.5	3	1800	CU	83	085	2	1	180	4	4
18	083	9	11	SCT	29.89	85	77	3	1800	CU	85	1/2	2	1	185	4	4
19	081	9	11	SCT	29.91	91	80	3	1800	CU	85	095	3	1	110	3	
20	078	11	11	SCT	29.92	90	79	3	1800	CU	85	095	3	1	110	3	
21	085	9	11	SCT	29.91	90	79	4	1800	CU	85	095	3	1	110	3	
22	114	08	10	SCT	29.91	88	78	4	1800	CU	85	100	3	1	115	3	3
23	125	12	10	SCT	29.89	87	78	3	1800	CU	85	100	3	1	115	3	3

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP: Octant (0-3) (5-8)	POSITION OF SHIP: Latitude (Degrees and tenths)	POSITION OF SHIP: Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	WIND: Direction (True) (00-36)	WIND: Speed (True) (Knots)	Visibility (90-99)	WEATHER: Present (00-99)	WEATHER: Past (0-9)	PRESSURE: Barometer Corrected (Mb)	AIR TEMP. (°C)	CLOUDS: Amount of Low Cloud	CLOUDS: Type of C_L (0-9)	CLOUDS: Height of Low Cloud	CLOUDS: Type of C_M (0-9)	CLOUDS: Type of C_H (0-9)	Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY: Characteristic (0-8)	3-HOUR PRESSURE TENDENCY: Amount of Change (Mb and tenths)	SIGNIFICANT CLOUD: Indicator	SIGNIFICANT CLOUD: Amount (Eights)	SIGNIFICANT CLOUD: Type	SIGNIFICANT CLOUD: Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_a L_a L_a$	$L_o L_o L_o$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	1	1	183	026	00	5	09	13	98	02	2	115	29	1	2	5	4	5	0	4	7	13	8	2	C	5C
SHIP	1	1	186	038	06	3	09	08	98	01	1	117	27	4	2	4	0	0	5	5	2	24	8	4	8	18
SHIP	1	1	189	050	12	3	09	13	98	02	0	122	27	2	2	4	0	0	5	5	6	03	8	2	8	04
SHIP	1	1	162	662	18	3	08	09	98	02	0	132	29	3	1	4	6	1	5	5	2	07	8	3	8	

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES: Indicator	SEA WAVES: Direction (Coded)	SEA WAVES: Period (Coded)	SEA WAVES: Height (Coded)	SWELL WAVES: Indicator	SWELL WAVES: Direction (Coded)	SWELL WAVES: Period (Coded)	SWELL WAVES: Height (Coded)	ICE ACCRETION: Indicator	ICE ACCRETION: Source	ICE ACCRETION: Thickness	ICE ACCRETION: Rate	SEA ICE: Indicator	SEA ICE: Kind	SEA ICE: Effect	SEA ICE: Bearing	SEA ICE: Distance	SEA ICE: Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e
0	66	74	1	09	2	C	1	18	2	C	2				ICE					
0	71	22	1	020			1	04	2	2	2				ICE					
0	53	24	1	09	2	1	1	09	2	2	2				ICE					
0	10	23	1	12	2	0	1	14	2	3	2				ICE					

DO NOT TRANSMIT: Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A_1	A_2	A_3
Celsius	Celsius	Celsius
26.4	25.0	26.4
21.2	23.9	24.9
2		
23.4	25.0	2

REMARKS _____ EXAMINED _____ USN, NAVIGATOR

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS Tawakoni ATF 114 DATE (GMT) 10 October 19 66

AT/PASSAGE FROM Pearl Harbor, Hawaii TO 14° 28' N 168° 48' W

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	094	7	10	Bkn	29.87	78	79	9	1500	Cu/Sc	85	095	2	1	110	3	2
01	108	9	10	Bkn	29.85	88	76	9	1500	Cu/Sc	85	095	2	1	110	3	2
02	116	7.5	10	R	29.84	85	79	9	1800	Cu/Sc	85	090	2	1	100	3	2
03	111	7.5	10	R	29.85	81	76	1	1800	Sc/Cu	85	090	2	1	100	3	2
04	111	7.5	10	R	29.85	81	76	9	1500	Sc/Cu	85	090	2	1	100	3	2
05	075	8.0	10	OVC	29.87	81	76	10	1500	Sc/Cu	85	090	2	1	100	3	2
06	1043	8.5	8	OVC	29.88	83	77	10	1500	Sc/Cu	85	080	2	1	090	3	2
07	086.5	8	8	Bkn	29.90	83	77	7	1800	Sc/Cu	85	080	2	1	090	3	2
08	066	11	8	Bkn	29.91	83	77	6	1800	Sc/Cu	86	080	2	1	090	3	2
09	127	11	3	~~OVC~~ R	29.92	83	77	10	500	ST	86	080	2	1	090	3	2
10	105	10	5	R	29.91	78	77	10	500	ST	86	090	2	1	095	3	2
11	104	11	3	R	29.90	77	76	10	500	Sc/Cu	86	100	2	1	105	3	2
12	102	11	3	R	29.90	76	75	10	500	Sc/Cu	86	110	2	1	105	3	2
13	125	10	5	BKN	29.84	78	76	8	1500	Sc	86	090	2	1	105	3	2
14	092	8	5	BKN	29.81	80	77	8	1800	Sc	86	090	2	1	085	3	2
15	105	6.5	5	BKN	29.80	81	77	8	1800	Sc	86	090	2	1	085	3	2
16	127	8	7	BKN	29.79	81	78	8	1800	Sc	86	110	2	1	115	3	2
17	172	5	8	BKN	29.80	81.5	78.5	8	1200	Sc	86	110	2	1	115	3	2
18	180	5	8	BKN	29.81	81.5	78.5	8	1500	Sc	86	110	2	1	115	3	2
19	180	5	8	BKN	29.82	81.5	78.5	8	1500	Sc	86	110	2	1	110	3	3
20	160	8	6	R	29.85	81.5	78.5	9	1500	Sc/Cu	86	110	2	1	110	3	3
21	116	9	8	BKN	29.88	76	79	6	1500	Sc/Cu	76	120	2	2	140	3	5
22	118	10	8	BKN	29.87	86	79	6	1800	Sc/Cu	86	135	3	2	140	3	3
23	115	10	10	SCT	29.86	86	79	4	1800	Cu/Sc	86	120	3	1	150	3	3

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP: Octont (0-3) (5-8)	POSITION OF SHIP: Latitude (Degrees and tenths)	POSITION OF SHIP: Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	WIND: Direction (True) (00-36)	WIND: Speed (True) (Knots)	Visibility (90-99)	WEATHER: Present (00-99)	WEATHER: Past (0-9)	PRESSURE: Barometer Corrected (Mb)	AIR TEMP. (°C)	CLOUDS: Amount of Low Cloud	CLOUDS: Type of C_L (0-9)	CLOUDS: Height of Low Cloud	CLOUDS: Type of C_M (0-9)	CLOUDS: Type of C_H (0-9)	Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY: Characteristic (0-8)	3-HOUR PRESSURE TENDENCY: Amount of Change (Mb and tenths)	SIGNIFICANT CLOUD: Indicator	SIGNIFICANT CLOUD: Amount (Eights)	SIGNIFICANT CLOUD: Type	SIGNIFICANT CLOUD: Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_o L_o L_a$	$L_o L_a L_a$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	2	1	154	623	00	7	09	07	98	03	1	115	31	5	2	4	4	0	5	5	6	14	8	7	8	18
SHIP	2	1	107	644	06	8	10	09	98	02	2	119	28	8	3	4	0	0	5	5	1	10	8	8	8	18
SHIP	2	1	139	694	12	8	13	11	97	53	2	125	29	8	2	4	0	0	5	4	4	00	8	8	8	04
SHIP	2	1	130	703	18	6	18	05	98	02	2	093	27	8	4	4	3	1	5	4	2	07	8	2	6	5C

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES: Indicator	SEA WAVES: Direction (Coded)	SEA WAVES: Period (Coded)	SEA WAVES: Height (Coded)	SWELL WAVES: Indicator	SWELL WAVES: Direction (Coded)	SWELL WAVES: Period (Coded)	SWELL WAVES: Height (Coded)	ICE ACCRETION: Indicator	ICE ACCRETION: Source	ICE ACCRETION: Thickness	ICE ACCRETION: Rate	SEA ICE: Indicator	SEA ICE: Kind	SEA ICE: Effect	SEA ICE: Bearing	SEA ICE: Distance	SEA ICE: Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e
0	02	21	1	10	2	1	1	11	2	1	2				ICE					
0	31	24	1	08	2	1	1	09	2	1	2				ICE					
0	0	23	1	11	21		1	11	2	2	2				ICE					
0	60	23	1	11	2	0	1	12	2	1	2				ICE					

DO NOT TRANSMIT: Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A_1	A_2	A_3
Celsius	Celsius	Celsius
24.4	23.4	30.2
24.6		

REMARKS _____ EXAMINED _____ USN, NAVIGATOR

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS TAWAKONI ATF 114 DATE (GMT) 11 OCTOBER 19 66

AT/PASSAGE FROM PEARL HARBOR, HAWAII TO 21° 35'N 158° 15'W

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	110	11	7	CT	29.82	87	74	2	1500	CU/SC	86	110	3	1	150	4	3
01	112	9	10	SCT	29.81	87	79	4	1500	CU/SC	86	105	3	1	150	4	3
02	0684	5	10	BKN	29.80	87	79	6	1500	CU	86	105	2	1	145	3	3
03	0655	4	10	BKN	29.81	86.5	79	6	1800	CU	86	130	3	2	160	2	2
04	0655	4	10	BKN	29.81	86.5	79	6	1800	CU	86	130	3	2	160	2	2
05	0585	2.5	10	BKN	29.83	84	78	6	1400	CU	86	130	3	2	160	2	2
06	265	5.5	10	BKN	29.84	84	78	6	1800	CU	86	130	3	2	160	2	4
07	265	5.5	10	BKN	29.86	84	78	6	1800	CU	86	130	3	2	160	2	4
08	253	12	10	BKN	29.88	80.5	76	6	1800	Cu	86	UNOBSERVED					
09	255	12	10	BKN	29.90	80.5	76	6	1800	Cu	86	UNOBSERVED					
10	260	13	10	BKN	29.89	81	77	6	1800	Cu	86	090	2	2	095	3	4
11	142	12	10	BKN	29.88	82	78	6	1800	Cu	86	090	2	2	095	3	2
12	116	9	8	BKN	29.87	82	77	8	1800	Cu	86	085	2	2	090	3	2
13	103	8	8	BKN	29.85	81	77	8	1800	Cu	86	070	2	2	075	3	2
14	116	7.5	8	BKN	29.83	81	76	4	1800	Cu	86	075	2	2	080	3	2
15	146	11	8	BKN	29.81	81	77	6	1800	CU	86	075	2	1	100	3	2
16	153	14	8	BKN	29.53	81	77	6	1800	CU	86	095	2	1	110	3	2
17	095	12	10	BKN	29.84	81.5	77	6	1800	CU	86	095	2	1	110	3	2
18	095	12	10	BKN	29.86	82	77	6	1800	CU/SC	86	095	2	1	110	3	2
19	112	6	10	BKN	29.88	84	78	6	1800	CU/SC	86	095	2	2	110	3	2
20	122	4	10	BKN	29.89	85	78	6	1800	CU	86	095	2	2	110	3	2
21	122	8	10	BKN	29.88	84	78	6	1800	CU	86	095	2	1	110	3	2
22	300	2	10	BKN	29.87	84	77	6	1800	CU/SC	86	090	2	1	100	3	2
23	344	7	10	BKN	29.86	86	78	8	1800	CU	86	090	2	1	100	3	2

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP: Octant (0-3) (5-8)	POSITION OF SHIP: Latitude (Degrees and tenths)	POSITION OF SHIP: Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	WIND: Direction (True) (00-36)	WIND: Speed (True) (Knots)	Visibility (90-99)	WEATHER: Present (00-99)	WEATHER: Past (0-9)	PRESSURE: Barometer Corrected (Mb)	AIR TEMP. (°C)	CLOUDS: Amount of Low Cloud	CLOUDS: Type of C_L (0-9)	CLOUDS: Height of Low Cloud	CLOUDS: Type of C_M (0-9)	CLOUDS: Type of C_H (0-9)	Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY: Characteristic (0-8)	3-HOUR PRESSURE TENDENCY: Amount of Change (Mb and tenths)	SIGNIFICANT CLOUD: Indicator	SIGNIFICANT CLOUD: Amount (Eights)	SIGNIFICANT CLOUD: Type	SIGNIFICANT CLOUD: Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_a L_a L_a$	$L_o L_o L_o$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	3	1			00	5	12	16	98	01	1	113	31	5	8	4	0	0	5	4	7	14	8	5	8	18
SHIP	3	1			06	5	270		98	02	2	105	28	5	8	4	0	0	5	4	7	14	8	5	8	18
SHIP	3	1	132	713	12	6	12	09	98	02	2	115	28	6	1	4	0	0	1	4	7	07	8	6	8	04
SHIP	3	1	139	705	18	5	10	12	99	02	2	112	29	4	2	4	3	0	1	4	2	17	8	4	8	18

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES: Indicator	SEA WAVES: Direction (Coded)	SEA WAVES: Period (Coded)	SEA WAVES: Height (Coded)	SWELL WAVES: Indicator	SWELL WAVES: Direction (Coded)	SWELL WAVES: Period (Coded)	SWELL WAVES: Height (Coded)	ICE ACCRETION: Indicator	ICE ACCRETION: Source	ICE ACCRETION: Thickness	ICE ACCRETION: Rate	SEA ICE: Indicator	SEA ICE: Kind	SEA ICE: Effect	SEA ICE: Bearing	SEA ICE: Distance	SEA ICE: Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e
0	52	24	1	11	2	1	1	15	2	2	2				ICE					
0	52	24	1				1				2				ICE					
0	54	24	1	09	2	1	1	09	2	1	2				ICE					
0	53	24	1	10	2	1	1	11	2	1	2				ICE					

DO NOT TRANSMIT: Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A_1	A_2	A_3
Celsius	Celsius	Celsius
	26.1	

REMARKS _____ EXAMINED _____ USN, NAVIGATOR

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS TAWAKONI (ATF-114) DATE (GMT) 12 OCTOBER 19 66

AT/PASSAGE FROM PEARL HARBOR, HAWAII TO 14°28'N - 168°43'W

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	293	3	10	BKN	29.83	87	78	6	1800	CU	86	090	2	1	100	3	2
01	094	6	10	BKN	29.81	90	79	6	1800	CU	86	070	2	1	085	3	2
02	150	2	11	BKN	29.71	88.5	79	4	1500	CU	86	110	2	1	110	3	4
03	051	3	10	BKN	29.70	91.5	80.5	6	1800	CU	86	090	2	1	095	3	4
04	100	4	10	BKN	29.70	90	79	6	1800	CU	86	090	2	1	090	3	4
05	216	5.5	10	BKN	29.82	84	76	6	1800	CU	86	110	2	1	135	3	4
06	249	5	10	BKN	29.84	84	76	6	1800	CU	86	110	2	1	140	3	4
07	239	6	10	BKN	29.85	83	76	6	1800	CU	86	110	2	1	150	3	4
08	240	9	10	SCT	29.87	83	76	5	1800	CU	86	110	2	1	130	3	3
09	137	6	10	SCT	29.87	82	76	5	1800	CU	86	110	2	1	135	3	3
10	080	7.5	10	SCT	29.88	82	76	4	1800	CU	86	110	2	1	140	3	3
11	074	11	10	SCT	29.76	82	76	4	1800	CU	86	110	2	1	140	3	3
12	074	11	10	SCT	29.84	82	76	4	1800	CU	86	110	2	1	140	2	2
13	074	11	10	SCT	29.81	81.5	76.5	4	1800	CU	86	110	2	1	140	2	2
14	115	7	10	SCT	29.79	81.5	76.5	4	1800	CU	86	110	2	1	140	2	2
15	076	7.5	10	SCT	29.78	81.5	77	4	1800	CU	86	110	2	1	140	2	2
16	076	7.5	10	SCT	29.78	81.5	76	4	1800	CU	86	110	2	1	140	2	2
17	093	10	10	BKN	29.80	82	77	8	1800	CU	86	110	2	1	140	2	2
18	105	12	11	BKN	29.81	84.0	78	5	1800	CU	86	110	1	1	130	2	4
19	125	12	10	BKN	29.84	85	80	7	1800	CU	86	110	1	1	130	2	4
20	265	10	10	BKN	29.86	85.5	79	5	1800	CU	86	110	1	1	130	3	4
21	265	12	10	BKN	29.86	89.0	79	5	1800	CU	86	110	1	1	130	3	4
22	119	11	8	BKN	29.84	87	79	8	1800	CU	86	140	3	1	120	3	3
23	139	9	8	BKN	29.82	87	77	5	1800	CU	86	130	3	1	126	3	3

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP: Octant (0-3) (5-8)	POSITION OF SHIP: Latitude (Degrees and tenths)	POSITION OF SHIP: Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	WIND: Direction (True) (00-36)	WIND: Speed (True) (Knots)	Visibility (90-99)	WEATHER: Present (00-99)	WEATHER: Past (0-9)	PRESSURE: Barometer Corrected (Mb)	AIR TEMP. (°C)	CLOUDS: Amount of Low Cloud	CLOUDS: Type of C_L (0-9)	CLOUDS: Height of Low Cloud	CLOUDS: Type of C_M (0-9)	CLOUDS: Type of C_H (0-9)	Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY: Characteristic (0-8)	3-HOUR PRESSURE TENDENCY: Amount of Change (Mb and tenths)	SIGNIFICANT CLOUD: Indicator	SIGNIFICANT CLOUD: Amount (Eighths)	SIGNIFICANT CLOUD: Type	SIGNIFICANT CLOUD: Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_a L_a L_a$	$L_a L_a L_a$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	4	1	148	698	00	5	29	03	98	01	2	102	31	5	2	4	0	0	1	4	6	14	8	6	8	04
SHIP	4	1	154	699	06	6	25	05	98	02	2	105	28	6	2	4	0	1	7	4	2	14	8	6	8	15
SHIP	4	1	159	707	12	3	07	11	98	02	2	105	29	4	2	4	0	0	5	4	1	10	8	3	8	18
SHIP	4	1	14.1	716	18	6	11	12	98	03	1	095	27	6	2	4	0	1	5	4	2	10	8	6	8	

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES: Indicator	SEA WAVES: Direction (Coded)	SEA WAVES: Period (Coded)	SEA WAVES: Height (Coded)	SWELL WAVES: Indicator	SWELL WAVES: Direction (Coded)	SWELL WAVES: Period (Coded)	SWELL WAVES: Height (Coded)	ICE ACCRETION: Indicator	ICE ACCRETION: Source	ICE ACCRETION: Thickness	ICE ACCRETION: Rate	SEA ICE: Indicator	SEA ICE: Kind	SEA ICE: Effect	SEA ICE: Bearing	SEA ICE: Distance	SEA ICE: Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e
0	01	21	1	09	2	1	1	10	2	1	2				ICE					
0		22	1	00	1/2	1/2	1	14	2	3	2				ICE					
0		23	1	00	2	0	1	14	2		2				ICE					
0	52	24	1	11	2	0	1	17	2	3	2				ICE					

DO NOT TRANSMIT: Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A_1	A_2	A_3
Celsius	Celsius	Celsius
~~25.9~~	~~24~~	~~30.6~~
28.9	24.4	30.6

REMARKS _____ EXAMINED _____ USN, NAVIGATOR

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS TAWAKONI AFT 114 DATE (GMT) THURSDAY 13 OCT 19 66

AT/PASSAGE FROM PEARL HARBOR, HAWAII TO

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	165	15	5	R	29.81	83	76	8	1500	CU	86	180	4	2	150	3	
01	111	3	10	BKN	29.77	85	77	5	1800	CU	86	170	3	1	110	3	
02	110	3	10	BKN	29.78	88	80	5	1800	CU/AC	86	150	3	1	110	2	2
03	1388	68	10	SCT	29.75	88	78.5	5	1800	CU/AC	86	070	3	1	075	2	1
04	125.5	6	10	SCT	29.77	81.5	78.5	5	1800	CU/AC	86	060	3	1	065	2	1
05	133	7	10	SCT	29.79	85	77.5	5	1800	CU/AC	86	065	3	1	070	2	1
06	133	7	10	SCT	29.79	88	78	5	1800	CU	86	065	3	1	070	2	1
07	0	7	10	SCT	29.81	80	75	5	1800	CU	86	065	3	1	080	2	1
08	0	7	10	SCT	29.84	80	76	5	1800	CU	86	080	3	1	090	2	1
09	125	11	10	SCT	29.84	79	74	4	1800	CU	86	090	3	1	090	2	2
10	133	8	8	SCT	29.84	79	76	5	1800	CU	86	110	3	1	120	3	2
11	141	8	8	SCT	29.83	78	74	5	1800	CU	86	110	3	1	120	3	2
12	133	6	8	SCT	29.80	75	75	3	1800	CU	86	110	3	1	110	3	2
13	142	6	8	SCT	29.76	79	77	3	1800	CU	86	090	3	1	120	3	2
14	142	7	8	SCT	29.76	75	77	3	1800	CU	86	090	2	2	120	2	2
15	142	7	8	SCT	29.75	81	76	4	1800	CU	86	090	2	2	120	2	2
16	111	11	8	SCT	29.75	81.5	76.5	4	1800	CU	86	090	2	1	120	2	2
17	111	11	8	BKN	29.76	80	76	6	1800	CU	86	090	2	1	120	2	1
18	303	5	8	BKN	29.79	80	76	8	1800	CU	86	050	2	1	070	2	1
19	340	13	6	BKN	29.83	82.5	76.5	9	1800	CU	86	025	3	2	040	3	3
20	340	6	8	BKN	29.84	80	76	10	1800	CU	86	110	3	2	095	3	2
21	112.5	03.5	10	BKN	29.84	83	77	6	1800	CU/AC	86	110	3	2	110	3	2
22	140	5	10	BKN	29.83	82	77	6	1800	CU	86	110	3	2	110	3	4
23	330	5	10	BKN	29.83	85	78.8	6	1800	CU/AC	86	110	3	2	080	3	4

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP: Octont (0-3) (5-8)	POSITION OF SHIP: Latitude (Degrees and tenths)	POSITION OF SHIP: Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	WIND: Direction (True) (00-36)	WIND: Speed (True) (Knots)	Visibility (90-99)	WEATHER: Present (00-99)	WEATHER: Past (0-9)	PRESSURE: Barometer Corrected (Mb)	AIR TEMP. (°C)	CLOUDS: Amount of Low Cloud	CLOUDS: Type of C_L (0-9)	CLOUDS: Height of Low Cloud	CLOUDS: Type of C_M (0-9)	CLOUDS: Type of C_H (0-9)	Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY: Characteristic (0-8)	3-HOUR PRESSURE TENDENCY: Amount of Change (Mb and tenths)	SIGNIFICANT CLOUD: Indicator	SIGNIFICANT CLOUD: Amount (Eights)	SIGNIFICANT CLOUD: Type	SIGNIFICANT CLOUD: Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_a L_a L_o$	$L_o L_o L_o$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	5	1	153	724	00	8	17	15	98	02	2	095	28	8	2	4	0	0	5	4	7	12	8	8	8	18
SHIP	5	1	142	729	06	4	13	07	98	02	0	088	31	4	2	4	0	0	1	4	3	14	8	3	8	04
SHIP	5	1	148	721	12	3	15	06	98	01	0	095	25	3	6	4	0	0	1	4	6	11	8	3	7	1
SHIP	5	1	158	712	18	6	30	05	98	03	1	088	27	6	2	4	1	0	1	4	1	14	8	8	8	04

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES: Indicator	SEA WAVES: Direction (Coded)	SEA WAVES: Period (Coded)	SEA WAVES: Height (Coded)	SWELL WAVES: Indicator	SWELL WAVES: Direction (Coded)	SWELL WAVES: Period (Coded)	SWELL WAVES: Height (Coded)	ICE ACCRETION: Indicator	ICE ACCRETION: Source	ICE ACCRETION: Thickness	ICE ACCRETION: Rate	SEA ICE: Indicator	SEA ICE: Kind	SEA ICE: Effect	SEA ICE: Bearing	SEA ICE: Distance	SEA ICE: Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e
0	56	22	1	18	2	1	1	15	2	2	2				ICE					
0	02	24	1	07	2	1	1	07	2	2	2				ICE					
0	04	23	1	11	2	1	1	11	2	2	2				ICE					
0	56	24	1	06	2	1	1	07	2	1	2				ICE					

DO NOT TRANSMIT: Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A_1	A_2	A_3
Celsius	Celsius	Celsius
25.3	24.4	30.0
25.6	23.9	30.1

REMARKS _____ EXAMINED _____ USN, NAVIGATOR

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS TRUXTON DLG 35 DATE (GMT) FRIDAY 14 OCT 19 66

AT/PASSAGE FROM PEARL HARBOR HAWAII TO

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	297	6	10	BKN	29.80	82	77	8	1500	CU	76				290	3	
01																	
02	275	4	10	BKN	29.75	84	79	7	1500	CU/CU	86				255	3	3
03																	
04	260	6	10	BKN	29.76	85	78	6	1500	CU	86				95	3	3
05	270	5	10	BKN	29.75	82	75	6	1500	CU/ST	86				110	3	3
06	101	5.5	6	SCT	29.80	82	76	4	1400	CU	86				160	3	3
07																	
08	081	7.5	6	SCT	29.83	81	76	4	1500	CU	86				160	3	2
09	081	7.5	6	SCT	29.83	81	76	4	1800	CU	86				160	3	2
10	115	8.5	6	SCT	29.83	81.5	77	5	1800	CU	86						
11	065	5	6	SCT	29.84	81	76	5	1800	CU	86						
12	068	5	6	SCT	29.83	81	76	5	1800	CU	86				160	3	2
13	0725	11.5	6	SCT	29.80	81	76.5	5	1800	CU	86						
14	0860	9	6	SCT	29.79	81	76.5	4	1800	CU	86						
15	091	8	6	SCT	29.78	80.5	77.0	4	1800	CU	86						
16	090	6	6	RW	29.79	79.5	77	4	1800	CU	86						
17	114	12	5	RKN	29.78	80	77	6	1500	CU/ST	86	130	3	1	125	3	3
18	109	9	10	SCT	29.81	81	78	4	1800	ST	86	125	2	1	160	3	3
19	120	10	10	BKN	29.82	85	78	7	1400	ST/CU	86	125	2	1	160	3	3
20	130	4	10	BKN	29.83	87	78	7	1400	ST/CU	86	140	3	1	170	3	3
21	101	4	10	BKN	29.85	85	79	8	1500	CU/ST	86	135	3	1	150	3	3
22	102	5.5	10	BKN	29.84	88	79	8	1500	CU/ST	86	130	3	1	155	2	2
23	102	6	10	BKN	29.81	87	79	8	1500	CU/ST	86	135	2	1	155	2	2

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP: Octant (0-3) (5-8)	POSITION OF SHIP: Latitude (Degrees and tenths)	POSITION OF SHIP: Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	WIND: Direction (True) (00-36)	WIND: Speed (True) (Knots)	Visibility (90-99)	WEATHER: Present (00-99)	WEATHER: Past (0-9)	PRESSURE: Barometer Corrected (Mb)	AIR TEMP. (°C)	CLOUDS: Amount of Low Cloud	CLOUDS: Type of C_L (0-9)	CLOUDS: Height of Low Cloud	CLOUDS: Type of C_M (0-9)	CLOUDS: Type of C_H (0-9)	Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY: Characteristic (0-8)	3-HOUR PRESSURE TENDENCY: Amount of Change (Mb and tenths)	SIGNIFICANT CLOUD: Indicator	SIGNIFICANT CLOUD: Amount (Eighths)	SIGNIFICANT CLOUD: Type	SIGNIFICANT CLOUD: Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_a L_a L_a$	$L_o L_o L_o$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	6	1	16.2	70.7	00	6	29	06	98	15	2	091	27	8	2	4	0	0	1	4	7	14	8	6	8	18
SHIP	6	1	164	715	06	3	10	05	98	01	1	091	28	3	2	4	0	0	5	4	2	12	8	4	4	18
SHIP	6	1	152	722	12	4	07	05	97	02	0	102	27	4	1	4	0	0	5	4	5	03	8	5	8	04
SHIP	6	1	151	721	18	4	11	19	18	02	1	095	27	4	7	4	0	05	4		2	17	8	4	7	18

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES: Indicator	SEA WAVES: Direction (Coded)	SEA WAVES: Period (Coded)	SEA WAVES: Height (Coded)	SWELL WAVES: Indicator	SWELL WAVES: Direction (Coded)	SWELL WAVES: Period (Coded)	SWELL WAVES: Height (Coded)	ICE ACCRETION: Indicator	ICE ACCRETION: Source	ICE ACCRETION: Thickness	ICE ACCRETION: Rate	SEA ICE: Indicator	SEA ICE: Kind	SEA ICE: Effect	SEA ICE: Bearing	SEA ICE: Distance	SEA ICE: Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e
0	4	24	1	00	0	0	1	04	2	2	2				ICE					
0	52	24	1	00	2	0	1	16	2	2	2				ICE					
0	52	21	1	00	2	0	1	16	2	2	2				ICE					
0	25		1	15	2		1	16	2	2	2				ICE					

DO NOT TRANSMIT: Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A_1	A_2	A_3
Celsius	Celsius	Celsius
272	256	220

REMARKS _____ EXAMINED _____ USN, NAVIGATOR

25
126
1/9
150

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS TAKANIS AT-170 DATE (GMT) 15 October 19 66

AT/PASSAGE FROM Pearl Harbor Hawaii TO

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	109	7.5	10	BKN	29.80	89	78	6	1500	Cu/Sc	86	155	1	1	155	2	1
01	105	7.5	10	BKN	29.79	84	78	6	1800	CU	86	155	1	1	155	2	1
02	096	5.5	10	BKN	29.77	88.5	78.5	7	1800	Cu	86	160	1	1	165	2	1
03	090.5	6	10	BKN	29.77	84	78	7	1800	Cu	86	160	1	1	165	1	1
04	111	3	10	BKN	29.77	89	79	6	1800	Cu/Sc	86	160	1	1	165	1	1
05	125	1.5	10	BKN	29.77	85	78	4	1800	Cu/Ac	86	115	2	2	120	3	2
06	158	10	10	SCT	29.78	83	77	5	1800	Cu	86	200	2	2	210	2	2
07	113	11	8	R	29.81	82	77	7	1800	Cu	86	190	3	1	220	3	2
08	121	10	8	SCT	29.82	80	76	5	1800	Cu	86	190	3	1	210	3	2
09	096	6	8	SCT	29.84	82	76	5	1800	Cu	86	110	3	1	150	3	2
10	100	6.5	8	SCT	29.85	82	77	5	1800	Cu	86	110	3	1	150	3	2
11	110	6.5	8	SCT	29.86	82	77	5	1800	Cu	86	110	3	1	150	3	2
12	114	7.5	8	RW	29.87	82	77	6	1800	Cu	86	140	3	1	160	3	2
13			8	BKN	29.87	81.5	77	6	1800	Cu	86	080	3	1	150	3	2
14	093.5	10.3	8	BKN	29.81	80	76	6	1800	Cu	86	080	2	1	105	3	2
15	093.5	10.3	8	BKN	29.80	80	75.5	6	1800	Cu	86	080	2	1	105	3	2
16	124	10	8	BKN	29.80	81	77	6	1800	Cu/Sc	86	085	2	1	095	3	2
17	125.5	7	8	BKN	29.82	81	76	7	1800	Cu/Sc	86	085	2	1	095	3	2
18	116	9	10	BKN	29.83	82	77	8	1800	Cu/Ac	86	090	2	1	100	3	1
19	125	7	10	BKN	29.85	83	76	8	1800	Cu/Sc	86	090	2	1	100	3	1
20	114	9.5	10	BKN	29.87	83.5	77.5	8	1800	Cu/Sc	86	090	2	1	100	3	1
21	114	9.5	10	BKN	29.88	84	78	8	1800	Cu/Sc	86	090	2	1	100	3	1
22	115	7	10	BKN				8	1800	Cu/Sc	86	090	2	1	080	3	3
23	110	7	10	BKN													

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP: Octant (0-3) (5-8)	POSITION OF SHIP: Latitude (Degrees and tenths)	POSITION OF SHIP: Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	WIND: Direction (True) (00-36)	WIND: Speed (True) (Knots)	Visibility (90-99)	WEATHER: Present (00-99)	WEATHER: Past (0-9)	PRESSURE: Barometer Corrected (Mb)	AIR TEMP. (°C)	CLOUDS: Amount of Low Cloud	CLOUDS: Type of C_L (0-9)	CLOUDS: Height of Low Cloud	CLOUDS: Type of C_M (0-9)	CLOUDS: Type of C_H (0-9)	Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY: Characteristic (0-8)	3-HOUR PRESSURE TENDENCY: Amount of Change (Mb and tenths)	SIGNIFICANT CLOUD: Indicator	SIGNIFICANT CLOUD: Amount (Eighths)	SIGNIFICANT CLOUD: Type	SIGNIFICANT CLOUD: Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_a L_a L_a$	$L_o L_o L_o$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	7	1	14/9	734	00		5 11	08	98	01	1	091	32	5	2	4	3	0	0	7	4	6	1	8		6	8 18
SHIP	7	1	54	736	06	5	16	10	98	01	1	085	28	5	2	4	0	0	1	4	1	03	8	5	8	18
SHIP	7	1	150	72 5	12		5	10	03	[illegible]		2 [illegible]											8			
SHIP	7	1	159	719	18	6	12	08	98	02		2 10	28	2	4	0	0			1	4	1	10	8		8 8	04

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES: Indicator	SEA WAVES: Direction (Coded)	SEA WAVES: Period (Coded)	SEA WAVES: Height (Coded)	SWELL WAVES: Indicator	SWELL WAVES: Direction (Coded)	SWELL WAVES: Period (Coded)	SWELL WAVES: Height (Coded)	ICE ACCRETION: Indicator	ICE ACCRETION: Source	ICE ACCRETION: Thickness	ICE ACCRETION: Rate	SEA ICE: Indicator	SEA ICE: Kind	SEA ICE: Effect	SEA ICE: Bearing	SEA ICE: Distance	SEA ICE: Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e
0	02	23	1	14/2		1	1	16	2	1	2				ICE					
0		23	1			2	1	21	22		2				ICE					
0		12	1	14	3		1	1			2				ICE					
0		544	1	04	2	1	1	10	2	1	2				ICE					

DO NOT TRANSMIT: Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A_1	A_2	A_3
Celsius	Celsius	Celsius
25.3	25.1	30.0

REMARKS _____ EXAMINED _____ USN, NAVIGATOR

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS TAWAKONI ATF-114 DATE (GMT) 16 OCT 1966 19

AT/PASSAGE FROM PEARL HARBOR HAWAII TO

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	175	5	7	Scat	29.53	86.5	79	6	12000	CU	86	//	//	//	020	4	1.5
01	117	4.5	8	//	29.[illegible]	[illegible]	[illegible]										
02	115	6	5	Clr	29.79	88	79	0	1500	cu/cl	86	//	//	//	155	4	3
03	190	1/-	8	Bkn	29.79	89	80	6	1800	CU/	86	/	/	/	035	4	3
04	145	6.5	4	Bkn	29.80	90	78	6	1900	CU/	86	090	2	1	075	4	3
05	105	9.5	8	Bkn	29.80	85	77	6	1800	CU/	86	090	2	1	075	4	3
06	090	5	8	BKN	29.83	82	77	6	1800	cu/cl	86	090	2	1	075	4	3
07	128	2.5	8	BKN	29.85	82	77	6	1800	cu/cl	86	090	2	1	080	4	3
08	112	3	8	BKN	29.88	82	77	6	1800	cu/cl	86	100	2	1	110	4	3
09	144	7.5	8	BKN	29.89	81.5	77	6	1800	cu/cl	86	100	2	1	110	4	2
10	140	8	8	BKN	29.89	81	77	6	1800	cu/cl	86	100	2	1	100	4	2
11	140	5	8	BKN	29.88	81	77	5	1[illegible]	cu	86	//	//	//	//	//	//
12	140	6	8	BKN	29.85	81	77	5	1[illegible]	cu	86	//	//	//	//	//	//
13	145	1	8	BKN	29.[illegible]	[illegible]	[illegible]	5	[illegible]	[illegible]	[illegible]	//	//	//	//	//	//
14	117	6	5	Sct	29.82	81	76	4	1800	CU	86	//	//	//	//	//	//
15	107	[illegible]	8	Sct	29.82	[illegible]	76	4	1800	CU	86	//	//	//	090	3	3
16	134	6	[illegible]	Sct	29.82	81	76	5	1800	CU	86	//	//	//	080	3	3
17	121	8.5	8	Sct	29.84	81	76	5	1800	CU/ST	86	//	//	//	085	3	3
18	121	8.5	8	Bkn	29.84	81	76	6	1900	CU	86	//	//	//	085	5	4
19	[illegible]	7	10	Sct	29.87	88	78	4	1900	CU	86	//	//	//	030	6	5
20	[illegible]	6.5	10	Sct	29.90	85	78	4	1800	CU	86	//	//	//	030	6	5
21	[illegible]	6	10	Sct	29.90	90	79	4	1800	CU	86	//	//	//	025	5	4
22	20	7	10	Sct	29.89	91	79	1	1[illegible]	[illegible]	85	//	//	//	030	5	5
23	150	7	10	[illegible]	29.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	//	//	//	[illegible]	5	[illegible]

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP: Octant (0-3) (5-8)	POSITION OF SHIP: Latitude (Degrees and tenths)	POSITION OF SHIP: Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	WIND: Direction (True) (00-36)	WIND: Speed (True) (Knots)	Visibility (90-99)	WEATHER: Present (00-99)	WEATHER: Past (0-9)	PRESSURE: Barometer Corrected (Mb)	AIR TEMP. (°C)	CLOUDS: Amount of Low Cloud	CLOUDS: Type of C_L (0-9)	CLOUDS: Height of Low Cloud	CLOUDS: Type of C_M (0-9)	CLOUDS: Type of C_H (0-9)	Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY: Characteristic (0-8)	3-HOUR PRESSURE TENDENCY: Amount of Change (Mb and tenths)	SIGNIFICANT CLOUD: Indicator	SIGNIFICANT CLOUD: Amount (Eights)	SIGNIFICANT CLOUD: Type	SIGNIFICANT CLOUD: Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_a L_a L_a$	$L_o L_a L_o$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	1	1	164	708	00	5	18	05	97	01	2	26.30	30	5	2	4	0	4	1	3	7	7	8	5	8	12
SHIP	1	1	162	703	06	5	09	05	98	02	2	10.2	28	5	2	4	0	0	7	5	1	10	8	6	8	04
SHIP	1	1	179	7.9	12	4	14	06	98	18	2	10.8	27	5	2	4	0	1/2	7	4	7	14	8	4	8	18
SHIP	1	1	191	714	18	5	12	09	98	03	1	10.4	27	5	2	4	0	0	7	4	1	07	8	4	8	14

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES: Indicator	SEA WAVES: Direction (Coded)	SEA WAVES: Period (Coded)	SEA WAVES: Height (Coded)	SWELL WAVES: Indicator	SWELL WAVES: Direction (Coded)	SWELL WAVES: Period (Coded)	SWELL WAVES: Height (Coded)	ICE ACCRETION: Indicator	ICE ACCRETION: Source	ICE ACCRETION: Thickness	ICE ACCRETION: Rate	SEA ICE: Indicator	SEA ICE: Kind	SEA ICE: Effect	SEA ICE: Bearing	SEA ICE: Distance	SEA ICE: Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e
0	60	26	1	//	//	//	1	02	2	1	2				ICE					
0	54	24	1	09	2	0	1	08	2	1	2				ICE					
0	53	24	1	[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]		2				ICE					
0	[illegible]	23	1	[illegible]	2	[illegible]	1	09	2	2	2				ICE					

DO NOT TRANSMIT		
Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A_1	A_2	A_3
Celsius	Celsius	Celsius
30.2	26.1	30.0

REMARKS _____ EXAMINED _____ USN, NAVIGATOR

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS _____ DATE (GMT) _____ 19 _____

AT/PASSAGE FROM _____ TO _____

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	150	7	8	BKN	29.80	92	71	6								4	5
01	150	7	8	BKN	29.83	91	77	6	1800	CU/SC	86				040	4	5
02	108	1.5	8	BKN	29.81	91	77	6	1800	CU/SC	86				050	4	5
03	110	5	8	BKN	29.82	87	75	6	1800	CU/SC	86				050	4	5
04	1365	9	8	BKN	29.82	85	73	8	1800	CU/SC	86				050	4	5
05	142	6.5	8	BKN	29.85	82	76	6	1600	CB/	86	140	1	1	050	6	5
06	142	6.5	8	BKN	29.84	82	77	6	1600	CB	86	140	1	1	050	6	5
07	134	6	8	R	29.88	81	76	7	1800	CU	86	1/4	1/4	1/4	060	3	4
08	143	07	8	R	29.89	79	76	8	1800	CU	86	1/4	1/4	1/4	060	3	4
09	138	07	8	BKN	29.87	74	76	7	1800	CU	86	025	3	2	065	3	4
10	138	9	8	BKN	29.88	80	75	8	1800	CU	86	020	3	2	065	4	4
11	134	9	8	OVC	29.87	80	76	10	1800	CU/ST	86	020	2	2	065	4	4
12	1345	9	8	OVC	29.86	80	77	10	1800	CU/ST	86	020	2	2	065	4	3
13	134	9	8	OVC	29.84	78	75	10	1800	CU/ST	84	020	2	2	065	4	4
14	150	7.5	8	OVC	29.83	79	78	10	1800	CU	84	145	2	2	065	4	4
15	150	7	8	OVC	29.83	79	75	10	1800	CU	84	145	2	2	065	4	4
16	150	7	7	BKN	29.83	79	75	10	1800	CU	83	145	2	2	065	4	4
17	150	7	8	BKN	29.83	80	76	10	1800	CU	83	145	2	2	065	4	4
18	140	7	8	BKN	29.84	82	76	8	1800	CU	83	145	2	2	050	4	4
19	140	6	7	BKN	29.84	82	76	9	1800	CU	83	145	2	2	050	4	4
20	130	7	8	BKN	29.87	82	77	8	1800	CU	83	150	2	2	050	4	4
21	140	7	8	BKN	29.88	82	77	8	1800	CU	83	150	2	2	050	4	4
22	184	6	8	BKN	29.89	86	74	8	1800	CU/ST	83	150	3	1	060	3	4
23	188	4	8	BKN	29.89	86	74	8	1800	CU/ST	83	150	3	1	060	3	4

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP			TIME (GMT)	Total Cloud Amt. (Coded)	WIND		Visibility (90-99)	WEATHER		PRESSURE	AIR TEMP. (°C)	CLOUDS					Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY		SIGNIFICANT CLOUD			
		Octant (0-3) (5-8)	Latitude (Degrees and tenths)	Longitude (Degrees and tenths)			Direction (True) (00-36)	Speed (True) (Knots)		Present (00-99)	Past (0-9)	Barometer Corrected (Mb)		Amount of Low Cloud	Type of C_L (0-9)	Height of Low Cloud	Type of C_M (0-9)	Type of C_H (0-9)			Characteristic (0-8)	Amount of Change (Mb and tenths)	Indicator	Amount (Eighths)	Type	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_a L_a L_a$	$L_o L_o L_o$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	2	1	207	711	00	5	18	07	98	20	1	112	22	3	2	4	6	0	7	4	7	14	8	3	X	18
SHIP	2	1	215	723	06	6	14	08	95	01	2	105	21	6	9	4	0	0	8	4	7	10	8	6	8	16
SHIP	2	1	226	729	12	8	02	09	92	03	2	112	27	9	6	4	0	0	7	4	6	10	8	8	8	18
SHIP	2	1	237	733	18	6	14	07	93	03	2	105	26	8	2	4	0	0	7	4	1	10	8	8	5	18

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES				SWELL WAVES				ICE ACCRETION				SEA ICE						DO NOT TRANSMIT		
			Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicator	Kind	Effect	Bearing	Distance	Orientation	Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	A_1	A_2	A_3
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e	Celsius	Celsius	Celsius
0	57	23	1	00	0	0	1	04	2	3	2				ICE								
0	58	25	1	14	2	1	1	05	2	3	2				ICE						27.8	25.0	30.0
0	53	24	1	02	2	1	1	07	2	2	2				ICE								
0	52	23	1	15	2	1	1	05	2	3	2				ICE								

REMARKS _____ EXAMINED _____ USN, NAVIGATOR

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS TAWAKONI ATF114 DATE (GMT) TUESDAY 18 Oct 19 66

AT/PASSAGE FROM PEARL HARBOR, HAWAII TO ALEUTIAN ISLANDS

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	250	07	10	BKN	29.86	81	77	8	1800	Cu	83	140	3	2	120	3	2
01	26	06	10	BKN	29 85	81	77	8	1500	CU	83	170	3	1	150	3	3
02	125	05	10	ok	29 86	79	75	10	1000	St/Cu	83	170	2	1	050	3	3
03	118	03	10	FUC	29.86	82	77	10	1000	St/Cu	83	308	2	1	030	3	3
04	319	03	10	CR	29.88	76	73	10	1000	St/Cu	83	316	2	1	032	3	3
05	091	06	10	BKN	29.88	75	75	8	1800	St/Cu	83	118	2	1	035	3	3
06	115	06	10	BKN	29.88	79	76	8	1500	St/Cu	83	145	3	1	180	3	3
07	126	11	10	BKN	29.91	79	76	8	1500	St	83	140	3	1	070	3	3
08	150	11	10	BKN	29.91	78	76	8	1500	Cu	83	130	3	2	075	3	3
09	114	04	10	SCT	29.91	79	76	4	1500	CU	83	125	3	2	075	3	3
10	120	3.5	8	SCT	29.91	75	76	3	1500	CU	83	1/1	1/1	1/1	120	3	2
11	115	3.5	8	SCT	29.90	75	76	3	1500	CU	83	1/1	1/1	1/1	115	3	2
12	115	3.5	8	SCT	29.89	78	76	3	1500	CU	83	1/1	1/1	1/1	140	3	2
13	130	8	8	SCT	29.88	75	76	4	1500	CU	83	1/1	1/1	1/1	140	3	2
14	163	1.5	8	SCT	29.89	76	76	4	1800	Cu	83	1/1	1/1	1/1	340	3	2
15	155	7	8	SCT	29.86	79	76	4	1800	Cu	83	1/1	1/1	1/1	340	3	2
16	160	7	8	SCT	29.86	78	74	4	1800	Cu	83	1/1	1/1	1/1	340	3	2
17	149	10	8	BKN	29.86	78	75	5	1800	Cu	83	1/1	1/1	1/1	340	3	2
18	130	13	10	SCT	29 87	78	75	4	1800	Cu	83	130	2	1	200	3	3
19	130	9	10	FEW	29.87	83	77	2	1500	Cu	83	1/1	1/1	1/1	1/1	1/1	1/1
20	140	9	10	BKN	29.90	83	77	7	1800	Cu	83	1/1	1/1	1/1	1/1	1/1	1/1
21	140	8	10	BKN	29.91	83	77	7	1800	Cu	83	1/1	1/1	1/1	1/1	1/1	1/1
22	125	12	10	BKN	29.90	83	77	7	1500	Cu	83	1/1	1/1	1/1	1/1	1/1	1/1
23	125	9	10	BKN	29.88	84	78	6	1800	Cu	83	1/1	1/1	1/1	1/1	1/1	1/1

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP: Octant (0-3) (5-8)	POSITION OF SHIP: Latitude (Degrees and tenths)	POSITION OF SHIP: Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	WIND: Direction (True) (00-36)	WIND: Speed (True) (Knots)	Visibility (90-99)	WEATHER: Present (00-99)	WEATHER: Past (0-9)	PRESSURE: Barometer Corrected (Mb)	AIR TEMP. (°C)	CLOUDS: Amount of Low Cloud	CLOUDS: Type of C_L (0-9)	CLOUDS: Height of Low Cloud	CLOUDS: Type of C_M (0-9)	CLOUDS: Type of C_H (0-9)	Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY: Characteristic (0-8)	3-HOUR PRESSURE TENDENCY: Amount of Change (Mb and tenths)	SIGNIFICANT CLOUD: Indicator	SIGNIFICANT CLOUD: Amount (Eights)	SIGNIFICANT CLOUD: Type	SIGNIFICANT CLOUD: Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_a L_a L_a$	$L_o L_o L_o$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	3	1	247	759	00	8	25	07	28	02	2	112	27	8	2	4	0	0	6	2	7	12	8	8	5	18
SHIP	3	1	252	759	06	8	12	06	98	01	3	119	26	8	4	4	0	0	8	2	4	00	8	8	6	18
SHIP	3	1	254	741	12	2	11	08	28	11	0	1[illegible]	[illegible]	3	1	4	0	0	7	2	7	[illegible]	8	2	8	18
SHIP	3	1	260	740	18	3	13	13	98	01	1	115	26	3	2	4	0	0	1	4	1	10	8	3	5	18

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES: Indicator	SEA WAVES: Direction (Coded)	SEA WAVES: Period (Coded)	SEA WAVES: Height (Coded)	SWELL WAVES: Indicator	SWELL WAVES: Direction (Coded)	SWELL WAVES: Period (Coded)	SWELL WAVES: Height (Coded)	ICE ACCRETION: Indicator	ICE ACCRETION: Source	ICE ACCRETION: Thickness	ICE ACCRETION: Rate	SEA ICE: Indicator	SEA ICE: Kind	SEA ICE: Effect	SEA ICE: Bearing	SEA ICE: Distance	SEA ICE: Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e
0	52	24	1	15	2	2	1	09	2	1	2				ICE					
0	58	23	1	15	2	2	1	[illegible]	2	2	2				ICE					
0	51	24	1	00	1/1	1/1	1	[illegible]	2	2	2				ICE					
0	53	23	1	15	2	1	1	20	2	2	2				ICE					

DO NOT TRANSMIT: Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A_1	A_2	A_3
Celsius	Celsius	Celsius
27.2	25.0	28.3
26.1	24.4	28.3
[illegible]	[illegible]	[illegible]

REMARKS _____ EXAMINED _____ USN, NAVIGATOR

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS TAWAKONI ATF114 DATE (GMT) 19 OCTOBER 19 66

AT/PASSAGE FROM ~~PEARL HARBOR, HAWAII~~ TO

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	120	8	10	BKN	29.88	85	78	6	1800	CU	87	"/"	"/"	"/"	250	7	2
01	170	7	10	[illegible]	29.89	85	78	6	[illegible]	[illegible]	87	"/"	"/"	"/"	250	7	2
02	130	4	10	BKN	29.89	83	76.5	6	1810	Cu	87	[illegible]	[illegible]	[illegible]	180	2	2
03	130	4	10	BKN	29.88	83	76	5	800	Cu	86	[illegible]	[illegible]	[illegible]	180	2	2
04	130	3	10	BKN	29.90	80	76	5	1800	Cu	86	[illegible]	[illegible]	[illegible]	180	2	2
05	130	3	10	BKN	29.91	81	76	5	1800	Cu	86	[illegible]	[illegible]	[illegible]	180	2	2
06	145	6	10	SCT	29.91	80	77	2	1800	Cu	86	"/"	"/"	"/"	215	7	2
07	160	7	10	SCT	29.92	79	76	1	1400	Cu	86	"/"	"/"	"/"	"/"	"/"	"/"
08	150	7	10	SCT	29.91	79	76	1	1800	Cu	86	"/"	"/"	"/"	"/"	"/"	"/"
09	150	10	10	SCT	29.95	79	75	1	1400	Cu	86	"/"	"/"	"/"	"/"	"/"	"/"
10	125	8	8	CLR	29.93	79	75	0	/	/	86	"/"	"/"	"/"	"/"	"/"	"/"
11	140	7	8	CLR	29.93	78	75	0	/	/	86	"/"	"/"	"/"	"/"	"/"	"/"
12	90	12	8	CLR	29.93	79	75	0	/	/	86	120	/	/	150	1	1
13	180	9	8	SCT	29.92	78	75	3	1400	CU	86	120	/	/	150	1	1
14	170	7	8	SCT	[illegible]	81	75	3	1800	CU	86	110	3	/	[illegible]	"/"	"/"
15	185	9	8	SCT	29.91	79	75	2	800	CU	86	170	3	/	"/"	"/"	"/"
16	170	7	8	SCT	29.91	79	75	2	1800	ST	86	165	3	/	"/"	"/"	"/"
17	165	7	8	SCT	29.92	79	75	3	1800	CU	86	170	3	/	270	3	3
18	160	5	9	SCT	29.95	79	76	4	1200	CU/CI	86	150	3	/	285	14	4
19	165	9	10	SCT	29.96	80	75	3	1400	CB/CU	86	170	2	/	265	12	[illegible]
20	155	9	10	SCT	29.98	81	77	3	1800	CU/CU	86	165	3	/	255	11	4
21	140	10	10	SCT	29.99	82	77	3	1800	CB/CU	86	175	3	1½	245	10	4
22	155	11	8	SCT	29.99	[illegible]	77	3	[illegible]	CU/CB	86	140	3	½	260	10	3
23	120	10	[illegible]	SCT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	86	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP: Octant (0-3) (5-8)	POSITION OF SHIP: Latitude (Degrees and tenths)	POSITION OF SHIP: Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	WIND: Direction (True) (00-36)	WIND: Speed (True) (Knots)	Visibility (90-99)	WEATHER: Present (00-99)	WEATHER: Past (0-9)	PRESSURE: Barometer Corrected (Mb)	AIR TEMP. (°C)	CLOUDS: Amount of Low Cloud	CLOUDS: Type of C_L (0-9)	CLOUDS: Height of Low Cloud	CLOUDS: Type of C_M (0-9)	CLOUDS: Type of C_H (0-9)	Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY: Characteristic (0-8)	3-HOUR PRESSURE TENDENCY: Amount of Change (Mb and tenths)	SIGNIFICANT CLOUD: Indicator	SIGNIFICANT CLOUD: Amount (Eights)	SIGNIFICANT CLOUD: Type	SIGNIFICANT CLOUD: Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_a L_a L_a$	$L_o L_o L_o$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	4	1	24[illegible]	[illegible]70	00	6	12	05	98	02	1	119	29	6	2	4	0	0	00	0	7	02	8	5	8	15
SHIP	4	1	260	740	06	2	15	06	98	01	1	129	27	2	2	4	0	0	00	0	1	03	8	2	8	18
SHIP	4	1	260	240	12	0	18	12	94	02	0	135	26	0	0	0	0	0	00	0	6	07	8	0	0	00
SHIP	4	1	26[illegible]	24[illegible]	18	3	16	05	98	15	0	143	26	3	1	4	0	1	00	02	1	4	8	3	8	18

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES: Indicator	SEA WAVES: Direction (Coded)	SEA WAVES: Period (Coded)	SEA WAVES: Height (Coded)	SWELL WAVES: Indicator	SWELL WAVES: Direction (Coded)	SWELL WAVES: Period (Coded)	SWELL WAVES: Height (Coded)	ICE ACCRETION: Indicator	ICE ACCRETION: Source	ICE ACCRETION: Thickness	ICE ACCRETION: Rate	SEA ICE: Indicator	SEA ICE: Kind	SEA ICE: Effect	SEA ICE: Bearing	SEA ICE: Distance	SEA ICE: Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e
0	32	23	1	/	/	/	1	/	/	/	2				ICE					
0	36	24	1	/	/	/	1	22	3	1	2				ICE					
0	[illegible]	[illegible]	1	/	2	/	1	/	2	/	2				ICE					
0	34	29	1	15	2	0	1	[illegible]	7	[illegible]	2				ICE					

DO NOT TRANSMIT: Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A_1	A_2	A_3
Celsius	Celsius	Celsius
29.4	27.5	30.6

REMARKS EXAMINED USN, NAVIGATOR

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS MIKE / TF 114 DATE (GMT) 26 OCTOBER 19 66

AT/PASSAGE FROM PEARL HARBOR HAWAII TO

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
~~00~~	150	12	8	SCT	29.97	83	77	4	1800	3/Cu	86	110	4	1½	270	8	5
~~01~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
~~02~~	160	10	8	SCT	29.94	85	77	1	1800	Cu	86	120		1	290	7	4
~~03~~	170	11	8	SCT	29.95	84	77	4	1800	4/Cu	86	100	9	1	290	8	4
~~04~~	170	12	8		29.[illegible]	[illegible]	77	6	1700	CU	86	100	4	1	290	8	5
~~05~~	150	14		SCT	29.95	80	75	[illegible]	1700	CU/AC	86	110	3	1	530	7	6
~~06~~ 1)	160	12	8	SCT	29.95	78.5	75.5	3	1100	4/AC	86	110	4	1½	290	6	5
~~07~~	140	15	10	SCT	29.98	74	74	4	1500	AC	85	115	4	1	300	6	2
~~08~~	160	13	9	SCT	29.98	78	75	4	1800	1/Cu	85	115	4	1	300	6	V
~~09~~	160	10	9	SCT	29.98	78	75	4	1500	CU	85	115	4	1	300	6	V
~~10~~	160	11.5	9	SCT	30.01	78.5	75	4	1500	CU	84	115	4	1	300	6	2
11 2)	160	11	8	SCT	30.00	78.5	75	3	1500	CU	84	165	3	1	250	4	3
~~12~~ 3)	155	12	8	SCT	29.98	79	75	4	1800	CU	84	[illegible]	3	1	270	4	3
13	160	10	8	SCT	29.99	79	75	4	1500	CU	84	160	3	1	270	4	3
14	160	5	10	SCT	29.96	79	75	2	1800	CU	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	155	6	10	SCT	29.95	78	75	1	1800	CU	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	130	10	10	SCT	29.95	77	75	2	1800	CU	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	170	10	10	SCT	29.95	77	76	2	1500	CU	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18 3)	120	8	10	SCT	29.98	78	75	2	1800	CU	86	110	1	1	110	3	2
19	210	13	10	SCT	29.99	81.5	76	2	1800	CU	85	115	2	1	150	3	4
20	140	13.5	10	SCT	29.99	80	76	2	1800	CU	83	150	2	1	160	5	6
21	150	12.3	10	SCT	30.00	80	75	2	1800	CU	83	150	2	1	160	5	6
22	130	10	10	[illegible]	[illegible]	80.5	75.5	[illegible]	[illegible]	[illegible]	82	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	160	5	8	SCT 2 OVC	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP: Octant (0-3) (5-8)	POSITION OF SHIP: Latitude (Degrees and tenths)	POSITION OF SHIP: Longitude (Degrees and tenths)	TIME (GMT)	Total Cloud Amt. (Coded)	WIND: Direction (True) (00-36)	WIND: Speed (True) (Knots)	Visibility (90-99)	WEATHER: Present (00-99)	WEATHER: Past (0-9)	PRESSURE: Barometer Corrected (Mb)	AIR TEMP. (°C)	CLOUDS: Amount of Low Cloud	CLOUDS: Type of C_L (0-9)	CLOUDS: Height of Low Cloud	CLOUDS: Type of C_M (0-9)	CLOUDS: Type of C_H (0-9)	Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY: Characteristic (0-8)	3-HOUR PRESSURE TENDENCY: Amount of Change (Mb and tenths)	SIGNIFICANT CLOUD: Indicator	SIGNIFICANT CLOUD: Amount (Eights)	SIGNIFICANT CLOUD: Type	SIGNIFICANT CLOUD: Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_a L_a L_a$	$L_o L_o L_o$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	5	1	310	740	00	3	15	12	98	03	0	149	28	2	2	4	0	4	0	0	7	07	8	2	8	18
SHIP	5	1	240	740	06	2	16	12	98	01	1	142	25	2	1	4	1	8	0	0	04	00	8	2	8	11
SHIP	5	1	260	740	12	4	16	12	98	020	1	142	26	4	1	4	0	0	0	0	7	12	8	4	8	1
SHIP	5	1	260	740	18	2	02	08	94	020		152	26	2	2	4	0	0	0	0	8	10	8	2	8	18

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES: Indicator	SEA WAVES: Direction (Coded)	SEA WAVES: Period (Coded)	SEA WAVES: Height (Coded)	SWELL WAVES: Indicator	SWELL WAVES: Direction (Coded)	SWELL WAVES: Period (Coded)	SWELL WAVES: Height (Coded)	ICE ACCRETION: Indicator	ICE ACCRETION: Source	ICE ACCRETION: Thickness	ICE ACCRETION: Rate	SEA ICE: Indicator	SEA ICE: Kind	SEA ICE: Effect	SEA ICE: Bearing	SEA ICE: Distance	SEA ICE: Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e
0	52	24	1	11	2	1	1	29	4	3	2				ICE					
0	58	25	1	11	2	1	1	31	3	3	2				ICE					
0	69	22	1	12	3	0	1	29	3	2	2				ICE					
0	59	23	1	16	2	1	1	12	2	2	2				ICE					

DO NOT TRANSMIT		
Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A_1	A_2	A_3
Celsius	Celsius	Celsius
25.8	24.1	30.0
26.1	23.9	29.

REMARKS _____ EXAMINED _____ USN, NAVIGATOR

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS Thurston DD 103 DATE (GMT) 31 January 19 44

AT/PASSAGE FROM Leyte to Guam TO Apra Harbor Guam

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	150	7	5	R	29.93	80	76	3	1700	Cu	82	110	2	1	100	8	7
01	140	7	5	R	29.93	81	77	3	1700	Cu	82	140	3	2	100	9	7
02	153	11.5	8	BKN	29.95	84	77	6	1800	Cu/St	82	120	3	2	115	5	7
03	160	8	8	BKN	29.95	81	77	7	1700	Cu	82	130	3	2	120	5	7
04	157	12	8	BKN	29.95	81.5	77.5	6	1800	Cu/Ci	82	125	3	2	120	5	7
05	160	12	8	BKN	29.96	82	77	6	1800	Cu	82	175	3	2	120	5	7
06	170	12	8	BKN	29.98	80	75	5	1800	Cu	82	165	2	1	245	4	5
07	200	11	9	BKN	30.00	79.5	76	5	1800	Cu	82	160	2	1	190	4	4
08	180	10	8	BKN	30.00	79	76	5	1800	Cu	82	160	2	1	190	4	4
09	180	8	8	BKN	30.01	79	76	5	1800	Cu	82	165	2	1	190	4	4
10	170	15	8	BKN	29.99	79	76	5	1800	Cu	82	11/11	11/11	11/11	11/11	11/11	11/11
11	170	15	8	BKN	29.99	79	76	5	1800	Cu	82	11/11	11/11	11/11	11/11	11/11	11/11
12	180	10	8	BKN	29.98	79	76	5	1800	Cu	82	11/11	11/11	11/11	11/11	11/11	11/11
13	190	15	8	BKN	29.96	79	75	5	1800	Cu	82	11/11	11/11	11/11	11/11	11/11	11/11
14	190	5	1/4	R	29.94	78.5	75	10	2000	Cb/Ci	82	160	3	1	290	6	6
15	190	5	8	R	29.93	78.5	75	9	2000	Cb/Ci	82	168	3	1	290	6	4
16	235	9	8	BKN	29.93	78.5	75	1	2000	Cb/Ci	82	235	2	1/2	290	9	3
17	250	10	8	SCT	29.93	78.5	75	4	1500	Cu	82	260	1	2	310	7	4
18	250	10	8	SCT	29.95	78.5	75	4	1800	Cu	82	260	1	2	310	7	4
19	270	10	8	BKN	29.93	82	77	7	1800	Cu	82	265	2	2	310	7	5
20	350	10	8	BKN	29.98	83	77	7	1800	Cu	82	310	2	2	330	6	4
21	350	10	8	BKN	29.98	85	77	8	1800	Cu	82	320	2	2	340	6	4
22	350	9	8	BKN	29.98	87	76	7	1800	Cu/Ci	82	340	3	1	345	5	4
23	355	7	8	BKN	29.96	89	78	7	1800	Cu/St	82	341	3	1	350	5	4

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP			TIME (GMT)	Total Cloud Amt. (Coded)	WIND		Visibility (90-99)	WEATHER		PRESSURE	AIR TEMP. (°C)	CLOUDS					Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY		SIGNIFICANT CLOUD			
		Octant (0-3) (5-8)	Latitude (Degrees and tenths)	Longitude (Degrees and tenths)			Direction (True) (00-36)	Speed (True) (Knots)		Present (00-99)	Past (0-9)	Barometer Corrected (Mb)		Amount of Low Cloud	Type of C_L (0-9)	Height of Low Cloud	Type of C_M (0-9)	Type of C_H (0-9)			Characteristic (0-8)	Amount of Change (Mb and tenths)	Indicator	Amount (Eights)	Type	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_a L_a L_a$	$L_o L_o L_o$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	6	1	258	730	00	2	15	07	98	53	0	1322	27	2	2	4	0	0	25	6	0	7	8	2	8	12
SHIP	6	1	250	110	06	4	17	12	98	01	2	1522	21	5	2	4	0	0	00	2	1	0	8	3	4	16
SHIP	6	1	254	144	12	4	18	10	98	02	2	1523	26	4	2	4	0	0	00	2	1	0	8	4	2	18
SHIP	6	1	258	718	18	3	25	10	98	03	0	1412	25	3	8	4	0	0	00	2	0	7	8	3	8	15

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES				SWELL WAVES				ICE ACCRETION				SEA ICE						DO NOT TRANSMIT		
			Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicator	Kind	Effect	Bearing	Distance	Orientation	Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	A_1	A_2	A_3
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e	Celsius	Celsius	Celsius
0	51	23	1	14	2	2	1	10	4	5	2				ICE						26.7	24.4	25.9
0	51	23	1	17	2	1	1	28	2	2	2				ICE								
0	52	24	1	00	2	2	1	00	2	2	2				ICE								
0	54	23	1	26	2	1	1	31	3	3	2				ICE						25.8	23.9	27.8

REMARKS _____ EXAMINED _____ USN, NAVIGATOR

OPNAV FORM 3144-1 (9-64)
0107-714-4100

DEPARTMENT OF THE NAVY

SHIP WEATHER OBSERVATION SHEET

USS TAWASKONI ATF 114 DATE (GMT) 22 OCT 19 66

AT/~~PASSAGE FROM~~ LAYSAN IS. TO

TABLE I

TIME (GMT)	WINDS ☐ ✓ IF ESTIMATED		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE (Degrees and tenths)		CLOUDS			SEA WATER TEMP. (Degrees and tenths)	SEA WAVES			SWELL WAVES		
	Direction (True)	Force (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		Direction (True)	Period (Seconds)	Height (Feet)	Direction (True)	Period (Seconds)	Height (Feet)
00	350	10	10	BKN	29.93	91	79	7	1800	CU/SC	82	350	3	1	345	5	3
01	350	9	10	SCT	29.93	94	77	3	1500	ST	82	310	3	1	340	5	3
02	340	10	10	SCT	29.93	94	78	3	1400	ST	80	350	3	1	340	5	3
03	350	12	10	SCT	29.94	90	76	5	1800	CU	82	345	3	1	340	5	3
04	350	12	10	SCT	29.95	89	76	5	1500	CU	80	350	3	1	340	5	3
05	345	13	10	SCT	29.94	80	71	5	1800	CU	82	345	3	1	340	5	3
06	340	12	10	SCT	29.97	77	71	3	2000	CU	80	350	3	1	000	5	3
07	340	5														6	3
08	000	7															
09			8	SCT												6	3
10				BKN													
11		4		BKN													
12		4		BKN		78											
13	340	9	8	BKN	29.97	77	70										3
14	000	12	8	BKN	29.96										020	3	3
15	010	13	8	BKN	29.96	76	71	3		ST	82				010	4	3
16	000	13	8	BKN	29.96	76	70	4	1800	ST	82	"/"	"/"	"/"	"/"	"/"	"/"
17	355	15	8	BKN	29.96	76	68	6		ST	82	000	2	2	010	4	4
18	350	12	10	BKN	29.98	76	65	7			82		2	2	000	6	6
19	000	10	10	BKN	30.04	71	75			CU	82		2	2	000	6	
20		14	10	BKN		58	74	7	1800	CU	82		2	2	000	5	
21	030	100	10	BKN		64	73	8	1800	CU	82	350	2	2	000	5	
22	030	20	10	BKN	30.02	85	73	4	1800	CU	82	020	2	1	310	7	5
23	030	15	10	BKN	30.00	80	71	5	1800	CU	82	020	2	2	310	6	6

TABLE II
SYNOPTIC OBSERVATIONS

FIRST GROUP OF MESSAGE	Day of Week (1-7) (GMT)	POSITION OF SHIP			TIME (GMT)	Total Cloud Amt. (Coded)	WIND		Visibility (90-99)	WEATHER		PRESSURE	AIR TEMP. (°C)	CLOUDS					Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY		SIGNIFICANT CLOUD			
		Octant (0-3) (5-8)	Latitude (Degrees and tenths)	Longitude (Degrees and tenths)			Direction (True) (00-36)	Speed (True) (Knots)		Present (00-99)	Past (0-9)	Barometer Corrected (Mb)		Amount of Low Cloud	Type of C_L (0-9)	Height of Low Cloud	Type of C_M (0-9)	Type of C_H (0-9)			Characteristic (0-8)	Amount of Change (Mb and tenths)	Indicator	Amount (Eights)	Type	Height
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Y	Q	$L_a L_a L_a$	$L_o L_o L_o$	GG	N	dd	ff	VV	ww	W	ppp	TT	N_h	C_L	h	C_M	C_H	D_s	V_s	a	pp	8	N_s	C	$h_s h_s$
SHIP	7	1	258	158	00	7	35	10	98	02	2	11232	72	7	2	4	0	0	0	0	7	10	8	7	8	18
SHIP	7	1	253	218	06	2	34	12	98	01	1	149	25	2	1	5	0	0	0	0	7	10	8	2	8	20
SHIP	7	1	255	113	12	5	34	09	98	03	2	156	35	5	2	4	0	0	0	0	0	02	8	5	9	18
SHIP	7	1	254	218	18	6	03	12	98	03	2	156	24	8	3	4	0	0	0	0	0	07	8	5		

Indicator	AIR-SEA DIFF. (Coded)	DEW POINT (°C)	SEA WAVES				SWELL WAVES				ICE ACCRETION				SEA ICE					
			Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Direction (Coded)	Period (Coded)	Height (Coded)	Indicator	Source	Thickness	Rate	Indicator	Kind	Effect	Bearing	Distance	Orientation
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	$T_s T_s$	$T_d T_d$	1	$d_w d_w$	P_w	H_w	1	$d_w d_w$	P_w	H_w	2	I_s	$E_s E_s$	R_s	ICE	C_2	K	D_i	r	e
0			1				1				2				ICE					
0	56	20	1	35	2	0	1	31	2	1	2				ICE					
0	54	19	1	36	2	0	1	02	2	2	2				ICE					
0	53	19	1	02	2	2	1	36	3	1	2				ICE					

DO NOT TRANSMIT		
Dry Bulb (Degrees and tenths)	Wet Bulb (Degrees and tenths)	Sea Water Temp. (Degrees and tenths)
A_1	A_2	A_3
Celsius	Celsius	Celsius
25.0	21.7	22.8
25.0	21.1	22.2

REMARKS _____ EXAMINED _____ USN, NAVIGATOR